

Paola A. (Prada)Tiedemann, PhD.

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Areas of Specialization

- Forensic/Analytical Chemistry
- Chemical odor profiling via gas chromatographic techniques
- Volatolomics analysis from forensic specimens: human scent, human remains, pathogens and biological specimens
- Law enforcement canine odor detection and training for forensic applications
- Unite interdisciplinary areas such as analytical chemistry, animal behavior and national security to provide research that fosters innovation and drives strategy

Academic History

POSTDOCTORAL FELLOWSHIP | 2010-2012 | FLORIDA INTERNATIONAL UNIVERSITY

- Intelligence Community Postdoctoral Fellow, Office of the Director of National Intelligence, United States Government (Explosive odor avian detection)
- Miami, FL, USA

DOCTORAL | 2006-2010 | FLORIDA INTERNATIONAL UNIVERSITY

- Major: Doctor of Philosophy in Chemistry (forensic science track concentration)
- Dissertation: Evaluation of Contact and Non-contact Trapping Efficiencies of Human Scent Chemical Profiles and their Stabilities under Different Environmental Conditions
- Miami, FL, USA

BACHELOR IN SCIENCE | 2003-2005 | FLORIDA INTERNATIONAL UNIVERSITY

- B.S. in Chemistry with Honors, *Cum Laude*
- Member of Honors College
- FIU Dept. of Chemistry/Biochemistry First Honors Thesis Undergraduate, 2005
- Miami, FL, USA

ASSOCIATES | 2001-2003 | MIAMI DADE COLLEGE

- A. A. Chemistry
- Graduated with Highest Honors
- Member of Phi Theta Kappa Honor Society
- Miami, FL, USA

Professional Experience

JAN 2018- PRESENT: GRADUATE PROGRAM DIRECTOR, TEXAS TECH UNIVERSITY INSTITUTE FOR FORENSIC SCIENCES

- Oversee Masters of Science in Forensic Science Graduate program
- Responsibilities include recruitment, retention, advising, procurement and maintenance of instruments and equipment for the forensic science program. In addition, developing program curriculum, overseeing course registrations and listings, and annual program assessments.
- Lubbock, Texas

2015-PRESENT: RESEARCH ASSISTANT PROFESSOR | TEXAS TECH UNIVERSITY INSTITUTE FOR FORENSIC SCIENCES

- Graduate faculty member in the Masters of Science in Forensic Science Graduate program
- Supervise graduate and undergraduate student research
- Law enforcement training and forensic consulting services
- Lubbock, Texas

2012-2014: RESEARCH AND DATA ANALYSIS FELLOW, SCIENTIFIC CONSULTING WHITEHORSE CONSULTING, LLC.

- Data analysis of conducted research experiments and recommendations for optimized training protocols/procedures in field applications of animal behavior
- Evaluation of acquired law enforcement training records for optimized performance levels of trained detection canine teams
- Springfield, VA

2010-2012: INTELLIGENCE COMMUNITY (IC) POSTDOCTORAL FELLOW FLORIDA INTERNATIONAL UNIVERSITY/UC DAVIS

- Office of the Director of National Intelligence (ODNI) Intelligence Community Postdoctoral Research Fellowship Recipient, United States Government
- Developing feasible methods for assessing avian response (either physiological or behavioral) to VOCs, and specifically, explosive analog compounds
- Determining optimal conditions for eliciting behavioral responses to presented odors by both laboratory and field testing exercises
- Davis, CA

2006-2010: GRADUATE RESEARCH ASSISTANT FLORIDA INTERNATIONAL UNIVERSITY

- Developing and evaluating experimental procedures for the use of human scent evidence under US Army Technical Support Working Group contract award
- Utilize law enforcement devices for optimization of human scent evidence collection protocols
- Work with canine teams for field testing of laboratory experiments and theory
- Teaching Assistant, Introductory Chemistry Laboratory, 2006 and Organic Chemistry I Laboratory, 2008

- Miami, FL

**2003-2005: UNDERGRADUATE RESEARCH ASSISTANT
FLORIDA INTERNATIONAL UNIVERSITY**

- Honors College Undergraduate Researcher
- First Honors Thesis in Chemistry Degree, Dept. of Chemistry & Biochemistry FIU
 - Thesis: Comparison of Extraction Methods for the Elimination of VOCs Present in Sorbents Used for Human Scent Evidence Collection
- Miami, FL

Professional Affiliations

- American Academy of Forensic Sciences (AAFS) Criminalistics Section, Associate Member
- AAFS ASB Standards Board Consensus Body– Dogs/Sensors
- Council of Forensic Science Educators (COFSE)
- National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) Dogs and Sensors Subcommittee Member, Chair
- American Chemical Society

Publications

1. M Oliva, D Zhang, **P.A. Prada-Tiedemann**, G. Gamez, Laser assisted sampling vs direct desorption flowing atmospheric pressure afterglow mass spectrometry of complex polymer samples: Forensic implications for pressure sensitive tape chemical analysis. *Talanta*, 2021, 231, 122333
2. J.U. Rojas-Guevara, JD Córdoba-Parra, GA Bohórquez, RA Vega-Contreras, and **P.A. Prada-Tiedemann**, El papel de los equipos caninos detectores de restos humanos en la investigación criminal. *Revista Científica General José María Córdoba*, 2021, 19(33), 91-111.
<https://doi.org/10.21830/19006586.638>
3. K. Blamar, **P.A. Prada-Tiedemann**, Characterization of Volatile Odor Profiles from Larval Masses in a Field Decomposition Setting, *Forensic Chemistry*, 2020, 21, 100288.
4. J. Raymer, J.U. Rojas-Guevara, **P.A. Prada-Tiedemann**, Decomposition Residual Odor Volatiles in Soil from a West Texas Environment. *Revista Criminalidad*, 2020, 62(3): 79-101.
5. **P.A. Prada**, M.X. Ochoa-Torres, J.U. Rojas-Guevara, G.A. Bohorquez, Incidence of odor discrimination in the training of substance detection canine teams: impact of its evaluation for final certification. *Revista Logos, Ciencias & Tecnología*, 2019, 12(1), 31-44.
6. **P.A. Prada** and K.G. Furton. Birds and Dogs: toward a comparative perspective on odor use and detection, *Frontiers Veterinary Science*, 2018, 5:188. doi: 10.3389/fvets.2018.00188.
7. **P.A. Prada**, La odorología forense: perspectivas químicas en un ámbito canino, *Revista Unidad K-9*, 2017, 7: 18-20.

8. C.L. Sanchez, A.M. Huertas, **P.A. Prada** and K.G. Furton, A Non-Contact Passive Approach for the Effective Collection of Target Explosive Volatiles for Canine Training Aid Development, *Journal of Forensic Science and Criminology*, 2016, 4 (2), ISSN: 2348-9804.
9. **P.A. Prada** and M. Chavez Rodriguez. Demining Dogs in Colombia – A Review of Operational Challenges, Chemical Perspectives, and Practical Implications, *Science and Justice*, 2016, 56: 269-277. DOI: 10.1016/j.scijus.2016.03.002
10. C.L. Sanchez, **P.A. Prada**, and K.G. Furton. On the importance of training aids and the definition of an explosive odor signature: Commentary on Kranz et al., *Forensic Science International*, 2015, 251: e18-e19.
11. **P.A. Prada**, A.M. Curran and K.G. Furton. The determination of characteristic human scent compounds on natural and synthetic fabrics, *Journal of Forensic Science and Criminology*, 2014, 1: S101.
12. Jessica S. Brown, **P.A. Prada**, A.M. Curran and K.G. Furton. Applicability of Emanating Volatile Organic Compounds from Various Forensic Specimens for Individual Differentiation. *Forensic Science International*, 2013, 226: 173-182.
13. **P.A. Prada**, A.M. Curran, K.G. Furton. The Evaluation of Human Hand Odor Volatiles on Various Textiles: A Comparison between Contact and Non- Contact Sampling Methods. *Journal of Forensic Sciences*, 2011, 56(4): 866-881.
14. **P.A. Prada**, A.M. Curran and K.G. Furton. Comparison of Extraction Methods for the Removal of Volatile Organic Compounds (VOCs) Present in Sorbents Used for Human Scent Evidence Collection. *Analytical Methods*, 2010, 2: 470- 478. (Featured article on the cover of Analytical Methods)
15. A.M Curran, **P.A. Prada**, and K.G. Furton. Canine Human Scent Identifications with Post Blast Debris Collected from Improvised Explosive Devices, *Forensic Science International*, 2010, 199: 103-108.
16. A.M. Curran, **P.A. Prada**, and K.G. Furton. The Differentiation of the Volatile Organic Signatures of Individuals through SPME-GC/MS of Characteristic Human Scent Compounds. *Journal of Forensic Sciences*, 2010, 55(1): 50-57.
17. **P.A. Prada** and K.G. Furton. Human Scent Detection: A Review of its Developments and Forensic Applications. *Revista de Ciencias Forenses*, 2008 1(2): 81-87.
18. A.M. Curran, S.I. Rabin, **P.A. Prada**, and K.G. Furton. On the Definition and Measurement of Human Scent: Response by Curran et al. *Journal of Chemical Ecology*, 2006 32(8): 1617-1623.
19. A.M. Curran, S.I. Rabin, **P.A. Prada**, and K.G. Furton. Comparison of the Volatile Organic Compounds Present in Human Odor Using SPME-GC/MS. *Journal of Chemical Ecology*, 2005 31:7: 1613-1625.
20. A.M. Curran, **P.A. Prada**, A.A. Schoon, J.R. Almirall, and K.G. Furton. Human Scent as a Biometric Measurement, *Proc. SPIE* Vol. 5779, Biometric Technology for Human Identification II; Anil K. Jain, Nalini K. Ratha; Eds. 2005, 398-408.

Submitted/Under Review

1. **P.A. Tiedemann**, Chapter- Human Scent: An overview of current knowledge and experimental designs in: *Odour in Textiles: Mechanisms of Generation and Control*, CRC Press, 2021.

Books

1. Rojas-Guevara, J.U., **Prada-Tiedemann, P.A.**, Titus, K., Córdoba-Parra, J.D., & Bohórquez, G.A (2020). *Forensic studies with human analogues: evaluation of decomposition and the use of residual odor detection dogs*. Ed. Colombia National Police. <https://doi.org/10.22335/EDNE.10>
2. **P.A. Prada-Tiedemann**, J.U. Rojas-Guevara, G.A. Bohorquez, M.X. Ochoa-Torres, J.D. Cordoba-Parra. *Police Canine Teams: importance of criteria for selection, training, certification and performance.* , Ed. Colombia National Police, 2019, ISBN: 978-958-52080-7-0 [https://revistalogos.policia.edu.co:8443/libros/Los Equipos Caninos Policiales.pdf](https://revistalogos.policia.edu.co:8443/libros/Los_Equipos_Caninos_Policiales.pdf)
3. **P.A. Prada**, Allison M. Curran, Kenneth G. Furton. *Human Scent Evidence*, Ed. CRC Press, Boca Raton, 2015, ISBN: 1466583959.

Book Chapters

1. G.A. Nevitt and **P.A. Prada**. “The Chemistry of Avian Odors: An Introduction to Best Practices” In *Handbook of Olfaction and Gustation*, 3rd Ed. Richard L. Doty, Wiley-Liss: New York, 2015, pp. 565-577.
2. **P.A. Prada** and K.G. Furton. “Recent Advances in Solid Phase Microextraction for Forensic Applications” In *Comprehensive Sampling and Sample Preparation*, Volume 3; Pawliszyn, J.; Le, X. C.; Li, X-F.; Lee, H. K.; Eds; Elsevier, Academic Press: Oxford, UK, 2012, pp. 877–891.

Manuscripts in Preparation

1. E. Deruyter, B. Weakly-Jones, **P. A. Prada-Tiedemann**, Decomposition in aquatic environments: an assessment of experimental schemes and developments. *Journal of forensic and legal medicine*. Manuscript in preparation, 2021.
2. K. Nettles, C. Ford and P.A. Prada-Tiedemann, Development of Profiling Methods for Contraband Firearm Volatile Odor Signatures. *Journal of Forensic Sciences*, manuscript in preparation, 2021.

Presentations

Invited Platform Presentations

- 2020
Seminar: “La Química del Olor: el puente entre la ciencia y los caninos” Invited Expert Speaker, The Dog Meeting Academy: July 3, 2020. Virtual Platform, Spain.
- 2020
Seminar: “Chemical odor perspectives in a canine world” Invited plenary guest speaker, Pacific Northwest Police Detection Dog Association, upcoming: May 18-22, 2020. Walla Walla, WA (postponed due to COVID19).
- 2019
Lecture: “Gas Chromatography-Mass Spectrometry” Invited guest speaker for Analytical Toxicology course (ENTX 6351), Texas Tech University. October 9, 2019.
- 2019
Lecture: “Chemistry of Decomposition and PMI Estimation” Invited guest speaker for Graduate Seminar Forensic Entomology (ENTX 6115), Texas Tech University. October 2, 2019.
- 2019
Lecture: “I’m in the Forensic Science Program – Now What?” Invited guest speaker for Seminar in Forensic Science (FSCI 5101), Texas Tech University. March 8, 2019.
- 2017
Conference Presentation: “Forensic Odorology: A Silent and Forgotten Trace Evidence Source in Criminal Investigations”, plenary speaker at the 6th International Conference on Forensic Research & Technology, Houston, TX. September 2017.
- 2017
Seminar: “Forensic Science: is it a potential “disaster on wheels” for science & justice?” Invited guest speaker for TTU School of Law, Capital Punishment Seminar. October 11, 2017.
- 2017
Seminar: “Olfateando el olor humano: el puente entre la ciencia y los caninos” Invited plenary speaker

for the Rio Negro Police Canine Scent Detection Seminar, Villa Regina Argentina. April 17-21, 2017.

- 2016
Lecture: "The Chemistry of Scent: the bridge between instruments and canines"
Invited guest speaker for TTU's Dept. of Chemistry and Biochemistry Departmental Seminar.
September 14, 2016.
- 2016
Lecture: "Canine Scent Evidence"
Invited guest lecturer for Crime Scene Investigation course (FSCI 5350), Texas
Tech University. February 4, 2016.
- 2015
Course: "Canine Detection Evaluations- Advancing Canine Team Performance through Improved
Assessments and Validation"
Invited course instructor for the Colombian National Police Handler and Canine Training Academy,
Facatativa, Colombia. November 30- December 2, 2015.
- 2015
Seminar: "Sniffing out scent: The bridge between instruments and canines" Invited seminar speaker for
Haureka 2015: The Art and Science of Scent Detection and Special Dog's Training, Helsinki, Finland.
November 20, 2015.
- 2015
Seminar: "The chemistry of scent: the bridge between field operations and the laboratory for locating
forensic evidence".
Invited guest lecturer for the Institute of Environmental and Human Health (TIEHH) Seminar Series,
Texas Tech University. November 2, 2015.
- 2015
Lecture: "The chemistry of scent: the bridge between field operations and the laboratory for locating
forensic evidence".
Invited guest lecturer for Introduction to Forensic Science course (ANTH 2308),
Texas Tech University. September 29, 2015.
- 2014
Seminar: "La optima combinación de caninos e instrumentación para evidencia
forense" – "The optimal combination of canines and instruments for forensic evidence".
Invited guest lecturer on behalf of the Colombian National Police, Handler and Canine Training
Academy, Facatativa, Colombia. January 9, 2014.
- 2012
Lecture: "Canines as Biological Detectors in Law Enforcement Applications".

Invited guest lecturer for Animal Behavior Undergraduate Course, Department of Biological Sciences, University of California, Davis. May 3, 2012.

Conference Poster Presentations (by my research group)

1. "What's that Lingering Smell? Evaluation of Residual Decomposition Odor Volatiles in Colombian Territory"
E. Deruyter, K. Nettles, B.S., M. Ochoa-Torres, O. Cristiano, J. Rojas-Guevara, G. Bohórquez, and **P. A. Prada-Tiedemann**, PhD (Poster Presentation)
 - The 2020 Texas Tech University Undergraduate Research Conference (TTU URC), Lubbock, TX. March 2020.
2. "Analyzing the Effects of Body Wrapping on Rate of Decomposition"
K. Titus and **P. A. Prada-Tiedemann**, PhD (Poster Presentation)
 - The 2020 Texas Tech University Undergraduate Research Conference (TTU URC), Lubbock, TX. March 2020.
3. "A Volatolomic Approach: A Step Forward in the Characterization of Wound Pathogens"
S. Gallegos, **P.A. Prada** PhD and K. Rumbaugh PhD. (Poster Presentation)
 - Military Health System Research Symposium (MHSRS) 2019, Department of Defense, Orlando, FL. August 20, 2019
4. "Forensic Taphonomy - A Perspective of Active Odor Chemicals in Dry Vs. Submerged Decomposition Perspectives"
E. Deruyter & **P.A. Prada** PhD. (Poster Presentation)
 - The 2019 Texas Tech University Undergraduate Research Conference (TTU URC), Lubbock, TX. April 2, 2019.
5. "The Decomposition Clock: A Characterization of Insect Volatile Odor Profiles"
K. Blamar, BS & **P.A. Prada** PhD. (Poster Presentation)
 - TTU Graduate School 18th Annual Graduate School Poster Competition, Lubbock, TX. March 26, 2019
 - The 71st Annual Meeting of the American Academy of Forensic Sciences (AAFS), Baltimore, MD. February 2019.
6. "Blood Decomposition Odor Profiling: An Instrumental and Field Application Tool in Forensic Detection"
K. Holbrook, BS & **P.A. Prada** PhD. (Poster Presentation)
 - TTU Graduate School 18th Annual Graduate School Poster Competition, Lubbock, TX. March 26, 2019
 - The 71st Annual Meeting of the American Academy of Forensic Sciences (AAFS), Baltimore, MD. February 2019.
7. "A Forensic Volatolomic Approach: A Step Forward in the Characterization of Wound Pathogens"
S. Gallegos, **P.A. Prada** PhD & K. Rumbaugh PhD. (Poster Presentation)
 - The 71st Annual Meeting of the American Academy of Forensic Sciences (AAFS), Baltimore, MD. February 2019.
8. "Insights on Condom Substrates: Fingerprint Development as a Function of Temperature Variation"
A. Patrick, BS, A. Soucey, BS & **P.A. Prada** PhD. (Poster Presentation)

- International Association of Identification (IAI), San Antonio, TX. July 2018.
9. “Rapid Generation of Potential Explosive Training Materials in Biological Detection: An Additional Tool in Explosive Crime Scene Response”
T. Nguyen BS, Nathaniel Hall, PhD. & **P.A. Prada** PhD. (Poster Presentation)
 - International Association of Identification (IAI), San Antonio, TX. July 2018.
 10. “Role of Time in K9 Narcotic Training Aids: Perspectives on Working Dog Performance”
L. Alejandro BS, **P.A. Prada** PhD. (Oral Presentation)
 - Annual Meeting of the Texas Academy of Science (TAS), Midland, TX. March 2018.
 11. “Narcotic Age & Working Dog Performance: Instrumental Perspectives on Training Aid Lifespan”
L. Alejandro BS, **P.A. Prada** PhD. (Poster Presentation)
 - The 70th Annual Meeting of the American Academy of Forensic Sciences (AAFS), Seattle, WA. February 2018.
 - AAFS Young Forensic Science Forum, Bring your own Poster Session, Seattle, WA. February 2018.
 12. “Human Skeletal Evidence: Perspectives for Narcotrafficking Group Identifications Through Modus Operandi from San Joaquín de Flores, Heredia, Costa Rica”
Kashmiere N. McGee BA, Georgina Pacheco MS, **P.A. Prada Ph.D.**, Kathy Sperry PhD. (Poster Presentation)
 - Annual Meeting of the Texas Academy of Science (TAS), Midland, TX. March 2018.
 - AAFS Young Forensic Science Forum, Bring your own Poster Session, Seattle, WA. February 2018.
 13. “Characterization of Volatile organic Compounds in Chronic Wound Pathogens”
S. Gallegos, **P. Prada, PhD.** & K. Rumbaugh PhD. (Poster Presentation, 1st Prize Poster Winner)
 - Texas Branch American Society for Microbiology (ASM) Meeting, New Braunfels, TX. March 2018.
 14. “Evaluation of K9 Narcotic Training Aid Age: an insight into the “instrumental sniff”
L. Alejandro BS, **P.A. Prada** PhD. (Poster Presentation)
 - The 6th International Conference on Forensic Research & Technology, Houston, TX. September 2017.
 15. “Hand Odor Volatiles and Drug Abuse: A Pilot Study using a Chemical-Dependent Target Group”
S. Kemboi, BS, M. Thoen PhD, **P.A. Prada** PhD. (Poster Presentation)
 - The 6th International Conference on Forensic Research & Technology, Houston, TX. September 2017.
 16. “Forensic Advantages of Safe Sex: Odor Profiling Condom Brands using HS-SPME-GC/MS”
A. Patrick BS, **P.A. Prada** PhD. (Poster Presentation)
 - The 6th International Conference on Forensic Research & Technology, Houston, TX. September 2017.
 17. “Arsenic-Fed Piglets: Assessing Heavy Metal Levels in Decomposing Pig Tissues and Soil Samples”
C.L. Brown BS, R. Paine PhD, D. Klein PhD, **P.A. Prada** PhD. (Poster Presentation)
 - The 69th Annual American Academy of Forensic Sciences Meeting (AAFS), New Orleans, LA. February 2017.

18. "Hand Odor Volatiles and Drug Abuse: A Pilot Study using a Chemical Dependent Target Group"
S. Kemboi BS, M. Thoen PhD, **P.A. Prada** PhD. (Poster Presentation)
 - The 69th Annual American Academy of Forensic Sciences Meeting (AAFS), New Orleans, LA. February 2017.
19. "Visualization of latent fingerprints on used condoms: Powdering method perspectives"
M. Radford BS, K. Sperry PhD, **P.A. Prada** PhD. (Poster presentation)
 - 5th International Conference on Forensic Research & Technology in San Francisco, CA. November 2016.

Conference Platform & Poster Presentations (Prior to TTU)

20. "A Static Collection Approach for Target Explosive Analog Odors"
C. Sanchez BA, A. Huertas BS, **P.A. Prada** PhD, Kenneth G. Furton PhD. (Poster Presentation)
 - The 67th Annual American Academy of Forensic Sciences Meeting (AAFS), Orlando, FL. February 2015.
21. "Close relatives with different odors: A comparison of feather odor signatures between Tricolored (Agelaius tricolor) and Red-winged (Agelaius phoeniceus) Blackbirds"
M. Friesen MS, **P.A. Prada** PhD, A. Engilis, S. Ebeler PhD, G. Nevitt PhD. (Poster Presentation)
 - North American Ornithological Conference. Vancouver, British Columbia, Canada August 2012.
22. "Olfactory Evidence: A New Era for Odor Profiling in Birds"
Paola A. Prada PhD, Kenneth G. Furton PhD and Gabrielle Nevitt PhD (Poster Presentation)
 - XVI International Symposium on Olfaction & Taste, Stockholm Sweden, June 2012.
23. "A Preliminary Analysis Linking Avian Olfaction to Potential Forensic Applications"
Claudia L. Sánchez BA, **Paola A. Prada** PhD, Kenneth G. Furton PhD and Gabrielle Nevitt PhD (Poster Presentation)
 - The Pittsburgh Conference (PITTCO) on Analytical Chemistry and Applied Spectroscopy, Orlando FL, March 2012.
24. "First Demonstration that Procellariiforms can Smell Plastic: The Good, The Bad and the Implications"
Paola A. Prada PhD, Kenneth G. Furton PhD and Gabrielle Nevitt PhD (Poster Presentation)
 - The 39th Annual Pacific Seabird Group Meeting (PSG), Haleiwa, HI February 2012.
25. "What the Nose Knows Best: Volatiles from Feathers and Nest Soil as Potential Individual Odor Signatures in Two Distinct Petrel Species"
Paola A. Prada PhD, Claudia L. Sánchez BA, Terry O'Dwyer PhD, Kenneth G. Furton PhD and Gabrielle Nevitt PhD (Oral Presentation)
 - The 39th Annual Pacific Seabird Group Meeting (PSG), Haleiwa, HI February 2012.
26. "Testing the Ability of Birds to Detect Forensic Odorants: Comparison with Canine Abilities and Instruments"
Paola A. Prada, PhD, Kenneth G. Furton PhD, Gabrielle Nevitt PhD. (Oral Presentation)
 - The 64th Annual American Academy of Forensic Sciences Meeting (AAFS), Atlanta, GA. February 2012.

27. "Avian Olfaction in Forensic Context: A Preliminary Analysis of Naturally Occurring Volatile Organic Compounds Associated With Feathers from Procellariiforms"
 Claudia L. Sanchez BA, **Paola A. Prada**, PhD, Kenneth G. Furton PhD. (Poster Presentation)
- 1st Annual International Forensic Research Institute Symposium, Miami, FL. March 2012.
 - The 64th Annual American Academy of Forensic Sciences Meeting (AAFS), Atlanta, GA. February 2012.
28. "The Science of Spying and Engineering of Espionage" Invited Speaker for the IC Postdoctoral Fellowship Program Central Intelligence Agency
 John Corkill, **Paola Prada** PhD (Oral Presentation)
- The 23rd Annual Hispanic Engineer National Achievement Awards (HENAAC) Conference, Orlando, FL October 2011
29. "Validation of the Human Scent Collection System (HSCS) for its Use with the Collection of Volatile Organic Compounds from Buccal Swab Specimens"
 Adrian S. Torres BS, BA, **Paola A. Prada** PhD and Kenneth G. Furton PhD (poster Presentation)
- American Chemical Society Florida Annual Meeting and Exposition (FAME), Orlando, FL May 2011.
30. "A First Step in Adapting Controlled Odor Mimic Permeation Systems (COMPS) to Study Olfactory Detection in Cockatiels"
 Victor M. Garcia, **Paola A. Prada**, PhD and Gabrielle Nevitt PhD (Poster Presentation)
- UC DAVIS 22nd Undergraduate Research, Scholarship & Creative Activities Conference, Davis, CA, April 2011
31. "Testing the Ability of Birds to Detect Explosive Odorants: Comparison with Canine Abilities and Instruments"
Paola A. Prada PhD, Kenneth G. Furton PhD, Gabrielle Nevitt PhD (Poster Presentation)
- The 11th Annual Intelligence Community Postdoctoral Research Fellowship Colloquium, Tysons Corner, VA, April 2011.
32. "Evaluation of the Operational Parameters of a Non-Contact Airflow Dynamic Device for Collection of Scent Trace Evidence"
Paola A. Prada, PhD, Allison M. Curran PhD, Kenneth G. Furton PhD. (Oral Presentation)
- The 63rd Annual American Academy of Forensic Sciences Meeting (AAFS), Chicago, IL. February 2011.
33. "Analysis of Volatile Organic Compounds of Heroin for Canine Detection by Using Solid Phase Microextraction/ Gas Chromatography-Mass Spectrometry"
 Claudia L. Sanchez, Howard Holness MBA, **Paola A. Prada** PhD, Kenneth G. Furton PhD. (Poster Presentation)
- 2nd Annual International Forensic Research Institute (IFRI) Symposium, Florida International University, Miami, FL, March 2013.
 - The 63rd Annual American Academy of Forensic Sciences Meeting (AAFS), Young Forensic Science Forum Poster Session, Chicago, IL, February 2011.
34. "A Preliminary Analysis of Naturally Occurring Volatile Organic Compounds Associated with Nest-sites and Feathers from Leach's Storm Petrels, *Oceanodroma Leucorhoa*"
Paola A. Prada, PhD, Gabrielle Nevitt PhD, Kenneth G. Furton PhD. (Oral Presentation)

- The 2011 Society for Integrative and Comparative Biology Annual Meeting (SICB), Salt Lake City, Utah, January 2011
35. "Temperature and Humidity Effects on the Stability of Human Odor"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Oral Presentation)
 - The 62nd Annual American Academy of Forensic Sciences Meeting (AAFS), Seattle, WA, February 2010.
 36. "Canine Field Performance: Evaluation of Human Scent Evidence Collection Mediums"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster Presentation)
 - International Working Dog Breeding Association Conference, Ieper, Belgium, May 2009.
 37. "The Evaluation of Human Hand Odor Volatiles on Various Fiber Chemistries: A Comparison Between Contact and Non-Contact Sampling Methodologies"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Oral Presentation)
 - The 61st Annual American Academy of Forensic Sciences Meeting (AAFS), Denver, CO, February 2009.
 38. "The Optimization and Evaluation of the Headspace Analysis of Head Hair Samples for the Application as a Human Scent Source"
 Jessica S. Wirks, BS, **Paola A. Prada**, BS, Allison M. Curran, PhD and Kenneth G. Furton PhD. (Poster Presentation)
 - The 61st Annual American Academy of Forensic Sciences Meeting (AAFS), Denver, CO, February 2009.
 39. "Determining Individual Hand Odor Profiles through Non-Contact Scent Collection Methodologies"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster Presentation)
 - The 60th Annual American Academy of Forensic Sciences Meeting (AAFS), Washington, DC, February 2008.
 40. "Human Scent Evidence Collection for Instrumental and Canine Detection"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster Presentation)
 - 7th International Seminar on Detection Dogs Sponsored by UK Leads, Scottish Police College, Kincardine, Scotland, June 2007
 41. "The Chemistry and Law behind the Use of Canines and Machines to Identify Drug Money and Suspects"
 Kenneth G. Furton Ph.D., J. Aarons BS, L. DeGreeff BS, H. Holness BS, D.T. Hudson BS, M. Macias and **Paola A. Prada** BS
 - Florida Annual Meeting and Exposition (FAME), Orlando, FL, May 2007.
 42. "Evaluation Of Fiber Composition Of Human Scent Collection Materials and Their Effect On Collected Human Hand Odor"
 Jessica S. Wirks, BS, **Paola A. Prada**, BS, Kenneth G. Furton PhD. (Poster Presentation)
 - The 60th Annual American Academy of Forensic Sciences Meeting (AAFS), Washington, DC, February 2008.
 - Florida Annual Meeting and Exposition (FAME) 2007, Orlando, FL May 2007.
 43. "Laboratory Experiments for the Optimization of Non-Contact Human Scent Sampling"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster/Oral Presentation)
 - Florida Annual Meeting and Exposition (FAME) 2007, Orlando, FL May 2007.

- The 59th Annual American Academy of Forensic Sciences Meeting (AAFS), San Antonio, TX, February 2007.
44. "Optimization of Non-Contact Human Scent Evidence Collection"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Oral Presentation)
- The 33rd Annual Federation of Analytical Chemistry and Spectroscopy Societies Meeting (FACSS), Orlando, FL, September 2006.
45. "Optimization of Sorbent Materials in Human Scent Identification"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster Presentation)
- The 4th Annual European Academy of Forensic Sciences Meeting (EAFS), Helsinki, Finland, June 2006.
46. "Optimization of Sorbent Materials Used to Collect Human Scent for Instrumental Analysis"
Paola A. Prada, BS, Allison M. Curran PhD, Kenneth G. Furton PhD. (Poster Presentation)
- South Florida Forensic Science Symposium, Ft. Lauderdale, FL, January 2007.
 - Florida Annual Meeting and Exposition (FAME) 2006, Orlando, FL May 2006.
47. "Compounds Present in Human Scent: A Population Study"
Paola A. Prada, BS, Allison M. Curran PhD, Adele A. Schoon PhD and Kenneth G. Furton PhD. (Poster Presentation)
- The 58th Annual American Academy of Forensic Sciences Meeting (AAFS), Seattle, WA, February 2006.
 - South Florida Forensic Science Symposium, Ft. Lauderdale, FL, February 2006.
48. "Human Scent as a Biometric Measurement"
Allison M. Curran BS, BS, **Paola A. Prada**, A.A., Adele A. Schoon, PhD., José R. Almirall, PhD. and Kenneth G. Furton PhD. (Poster Presentation)
- The International Society for Optical Engineering (SPIE) Defense and Security Symposium, Orlando FL, March 2005
 - South Florida Forensic Science Symposium, Ft Lauderdale FL, February 2005
49. "Supercritical Fluid Extraction of Organic Compounds Present in Adsorbents Used In Human Scent Evidence Collection"
Paola A. Prada, AA, Allison M. Curran BS, BS & Kenneth G. Furton PhD (Poster Presentation)
- The Pittsburgh Conference (PITTCON), Orlando FL, February 2005
 - South Florida Forensic Science Symposium, Ft Lauderdale FL, February 2005
50. "Comparison of Pressurized Fluid Extraction Methods of Adsorbents For Use In Human Scent Evidence Collection"
Paola A. Prada, AA, Allison M. Curran BS, BS & Kenneth G. Furton PhD (Poster Presentation)
- The 57th Annual American Academy of Forensic Sciences Meeting (AAFS), New Orleans LA, February 2005
 - Young Forensic Scientists Forum, Bring Your Own Poster, AAFS, New Orleans LA, February 2005
 - National Collegiate Honors Council, NCHC, St. Louis, MO, October 2005
51. "Supercritical Fluid Extraction of Organic Compounds from Adsorbents Used to Collect Human Scent Evidence"
Paola A. Prada, AA, Allison M. Curran BS, BS & Kenneth G. Furton PhD (Poster Presentation)

- The Joint Meeting of the Southern Association of Forensic Scientists, the Midwestern Association of Forensic Scientists, the Mid-Atlantic Association of Forensic Scientists, and the Canadian Society of Forensic Science, Orlando FL, September 2004

Teaching Experience

- Texas Tech University

UNDERGRADUATE

- FSCI 2308 Forensic Science (2016-present)
- FSCI 4300 Independent Studies in Forensic Sciences (2019-present)
- FSCI 4355 Forensic Trace Evidence *online* (2020-present)

GRADUATE

- FSCI 5254 Introduction to Forensic Drug Chemistry (2016-present)
- FSCI 5256 Forensic Toxicology (2018-present)
- FSCI 5257 Explosives and Arson Investigation (2019-present)
- FSCI 5260 Report Writing and Expert Testimony (2021-present)
- FSCI 5308 Fundamentals of Forensic Science (2016-present)
- FSCI 5355 Instrumental Methods for Trace Evidence Analysis (2018-present)
- FSCI 6000 Master's Thesis (2016-present)
- FSCI 7000 Research (2016-present)

- Florida International University

UNDERGRADUATE

- CHM 1032 Chemistry & Society Laboratory (Fall 2006)
- CHM 2210 Organic Chemistry I Laboratory (Fall 2008)

Teaching Administration and Curriculum Development

- During my appointment as research assistant professor at TTU's Institute for Forensic Science, I developed courses to strengthen and develop the forensic curriculum as well as helped established forensic chemistry and forensic investigation concentrations within the Masters of Science in Forensic Science program.

Course #	Course Title	Role	Term Developed
FSCI 4355	Forensic Trace Evidence	Course Developer	Spring 2020
FSCI 5254	Introduction to Forensic Drug Chemistry	Course Developer	Fall 2015
FSCI 5256	Forensic Toxicology	Course Developer	Spring 2018
FSCI 5257	Explosives and Arson Investigation	Course Developer	Spring 2018
FSCI 5308	Fundamentals of Forensic Science	Course Developer	Spring 2017
FSCI 5355	Instrumental Methods for Trace Evidence Analysis	Course Developer	Spring 2016
	Established forensic chemistry & investigation Concentrations within MS Forensic Science	Curriculum chair	Fall 2018

- I spearheaded the Forensic Science Program Accreditation Commission (FEPAC) application for the forensic science program during 2018. This entailed a detailed application preparation to the American Academy of Forensic Sciences which included detailed review of curriculum, student progress and achievements, faculty research output, and overall program status.

Research Grant Support

Awarded

- PI \$270,000. Environmental Impact on Explosives Detection Dogs and Mitigation Strategies, DoD Army Research Office, 2021-2022
- PI \$24,160.00 Assessment of Decomposition Training Aids Using a Controlled Experiment Framework, Sirius Metrics, 2021
- Co-PI \$158,829. Indicators of Heat and Acclimatization Responses in Canines, Chiron K9 LLC, June 2020 – November 2022.
- Co-PI \$446,197. Leveraging Canine Cognition to Enhance Search Vigilance in Operational Scenarios, Department of Homeland Security, Awarded, June 2020 – 2022.
- PI \$4,400. An Undergraduate Research Team Design for the Generation of Forensic Decomposition Odor Studies – Females in Forensics. Texas Tech University, High Impact Grant, 2019.
- Co-PI \$70,000. A multidimensional approach to assess olfaction in dogs with application to explosives detection. Texas Tech University Seed Grant for Interdisciplinary Research, 2017-2018.

Graduate Theses Directed: M.S. in Forensic Science

Texas Tech University, Thesis Advisor and Chair

- Kirsten Nettles, Detection of Volatile Organic Compounds in Firearms, anticipated 2021.
- Samuel Seay, Evaluation of Deposition Environments as a Function of Insect Succession in the High Plains Region, anticipated 2021.
- Katie Blonar, The Use of Entomological Samples as Potential Odor Biomarkers for Decomposition Stages, 2019.
- Kiana Holbrook, The Instrumental Evaluation of Blood Decomposition Volatiles on Various Substrates and their Relationship to Presumptive Test Methods, 2019.
- Jennifer Raymer, Evaluation of Decomposition Residual Odor using *Sus Scrofa* as a Sampling Model, 2019.
- Thy Nguyen, A Novel Method for the Creation of Explosive Detection Training Aids for Canines using an Olfactometer, 2018.
- Amanda Patrick, Condom Odor Profiling with HS-SPME and Temperature effect on Condom Fingerprint Development, 2018.
- Lauren Alejandro, The Evaluation of Canine Training Aids Storage over Time on Working Dog Performance, 2018.

- Kashmiere Mcgee, Human Skeletal Evidence: Perspectives for Narcotrafficking Group Identifications Through Modus Operandi from San Joaquín de Flores, Heredia, Costa Rica, 2018.
- Silas Kemboi, Hand Odor Volatiles and Drug Abuse: A Pilot Study using a Chemical Dependent Target Group, 2018.
- Courtney Brown, Arsenic-fed piglets: Assessing Heavy Metal Levels in Decomposing Pig Tissues and Soil Samples, 2017.
- Michael Radford, Visualization of latent fingerprints on used condoms: Powdering method perspectives, 2016.

Texas Tech University, Internship Advisor and Chair

- Kathryn Ganley, anticipated 2020
- Jacqueline Molinar-Miranda, anticipated 2021
- Jacob Jahn, anticipated 2021

Undergraduate Research Project Advisor

Texas Tech University

- Katherine Titus, 2019-present: Texas Tech University, “Effect of Body Wrapping on Decomposition Processes”
- Emily Deruyter, 2018-present: Texas Tech University Pi2 Research Scholar Program, “Active Odor Chemicals in Human Remains”
- Perla Hernandez, 2019-present: Texas Tech University, “Forensic Odor Profiling of Larval Masses in Decomposition Samples”
- Shawna Gallegos, 2017-2019: Texas Tech University CISER Scholar – Center for the Integration of STEM, “Characterization of Volatile Organic Compounds in Chronic Wound Pathogens”

University of California Davis

- Theresa Encalada, 2012, University of California, Davis, Department of Biological Sciences, “Testing Olfactory Capability in Chickens as an Experimental Model”
- Taryn Zank, 2012, University of California, Davis, Department of Biological Sciences, “Training *Nymphicus hollandicus* in order to determine their olfactory ability”

Florida International University

- Claudia L. Sanchez, 2010-2011, Florida International University, Department of Chemistry & Biochemistry, “Analysis of Volatile Organic Compounds of Heroin for Canine Detection by Using Solid Phase Microextraction/ Gas Chromatography-Mass Spectrometry”

- Adrian Torres, 2010-2011, Florida International University, Department of Chemistry & Biochemistry, “Validation of the Human Scent Collection System (HSCS) for its Use with the Collection of Volatile Organic Compounds from Buccal Swab Specimens”
- Victor Garcia, 2010-2011, University of California, Davis, Department of Biological Sciences, “Adapting Controlled Odor Mimic Permeation System (COMPS) to Study Olfactory Detection in Cockatiels”
- Norma Caraballo, 2008, Florida International University, Department of Chemistry & Biochemistry, “The Evaluation and Analysis of the Direct Collection of Human Hand Odor on Rayon Fabric”
- Jessica Wirks, 2007, Florida International University, Department of Chemistry & Biochemistry, “Evaluation of fiber composition of human scent collection materials and their effect on collected human hand odor”

Awards / Honors

- 2019 Outstanding Woman Leader (OWL) Award, West Texas Association for Women in STEAM, Lubbock, TX
- 2015 Appreciation Award for Professional Contribution to the Colombian National Police Canine and Handler Training Academy, Bogota, Colombia
- 2010 Intelligence Community (IC) Postdoctoral Fellowship, Office of the Director of National Intelligence (ODNI) United States of America
- 2007 Graduate Student Association Scholarly Forum Poster Competition, 2nd Place
- 2006 Edward Whittaker Award for Outstanding Student Presentation in Forensic Science, Nova Southeastern University Forensic Science Symposium
- 2006 FIU College of Arts & Sciences Award for Outstanding Academic Achievement in Chemistry (B.S.)
- 2005 American Chemical Society, South Florida Section, FIU Dept. of Chemistry/Biochemistry First Honors Thesis Undergraduate
- 2004 Scientific Research Award 2nd Place, FIU Honors College Convocation
- 2004-2005 National Dean’s List
- 2003 Eduardo Padron Scholarship Recipient
- 2001 Presidential Scholars Award Recipient

Languages

- English and Spanish

TTU Service

Departmental Service:

- June 2020- Present: Undergraduate Minor Program Director, Forensic Science
- January 2018 - present: Graduate Program Director, Forensic Science Master’s Program
- Fall 2019- present: Environmental Toxicology Laboratory Safety Committee
- Fall 2019-present: General Departmental Seminar Committee

- Fall 2018 – present: Environmental Toxicology Curriculum Committee
- Spring 2018 – present: Environmental Toxicology Fix-It Committee
- Fall 2018/Spring 2020: Environmental Toxicology IFS Director Faculty Search Committee
- Fall 2017-present: Forensic Science Program Recruitment Faculty
- Spring 2016 – 2018: IFS Student Research Funding Coordinator
- Spring 2016 –2018: IFS Emergency Action Coordinator (EAC)
- Fall 2015 – present: IFS Research Laboratory Director
- Fall 2015 – present: IFS Forensic Science Admissions Committee Chair
- Fall 2015 – present: Forensic Science M.S. Graduate Committee Member
- Spring 2016 –present: Forensic Science M.S. Comprehensive Examination Committee

University Service:

- 2020 - West Texas Association for Women in Science Chapter (WT-AWIS), Faculty Advisor
- 2019 – Forensic Science Society (FSS) Faculty Advisor
- 2018 – present: Program in Inquiry and Investigation Pi2 Faculty Mentor
- 2017 – TTU Hispanic Council Founding Faculty Representative, Chair
- 2017 - Latino Hispanic Faculty Staff Association
- 2016 - Texas Tech University’s Mentor Tech Program

Professional Service

- OSAC Dogs and Sensors Subcommittee Chair (October 2020 - present)
- OSAC Dogs and Sensors Subcommittee Executive Secretary (March 2018-2020)
- Reviewer, Forensic Chemistry, 2019
- Reviewer, Journal of Forensic Sciences, 2019
- Reviewer, PNAS, 2018
- Reviewer, Talanta, 2017
- Assistant Editor, Sample Preparation, 2012- 2017

Professional Service (to the community/public)

- Ramirez Elementary School, Participant Science Night, Lubbock, Texas, USA (January 2020).
- Frenship High School, Guest Speaker, Lubbock, Texas, USA, approximately 5 hours (One Time). (October 2019).
- Estacado High School, Guest Speaker, Lubbock, TX, United States, approximately 2 hours (One Time), Junior and senior high school students visited the Institute of Forensic Sciences to learn different

career and education opportunities within this field of practice. This community service activity included approximately 30+ students. (April 18, 2018).

- South Plains College, Guest Speaker, Lubbock, TX, United States, approximately 5 hours (One Time), Pro Bono, The South Plains College Biology Club and the Institute for Forensic Science partnered to bring forensic career advising to undergraduate community college students. (October 27, 2017).
- Slaton High School, Guest Speaker, Lubbock, TX, United States, approximately 4 hours (One Time), Pro Bono, Key accomplishments were initiating a collaboration between the Slaton ISD to jointly bridge an interest to forensic science to local high school students. (October 23, 2017).
- Lubbock Cooper High School, Guest Speaker, Lubbock, TX, United States, approximately 5 hours (One Time), High school students were able to understand the types of research activities/projects currently underway in my research laboratory. This community service activity included approximately 50+ students. (November 18, 2016).
- All Saints High School, Guest Speaker, Lubbock, TX, United States, approximately 2 hours (One Time). (October 21, 2016).
- Eastern New Mexico University, Guest Speaker, Lubbock, TX, United States, approximately 4 hours. (October 21, 2016).
- South Plains Academy, Guest Speaker, Lubbock, TX, United States, approximately 7 hours (One Time). (May 11, 2016).
- Optimist Club, Guest Speaker, Lubbock, TX, United States, approximately 1 hour (One Time). The presentation was for the enrichment of members of the Optimist Club introducing the Institute for Forensic Science at Texas Tech and how it benefits law enforcement. (November 4, 2015).
- Trinity Christian School, Guest Speaker, Lubbock, TX, United States, approximately 1 hour, Delivered a PowerPoint presentation detailing some basic principles in forensic science, and highlighted some research activities conducted in the laboratory. (September 22, 2015).

Collaborators

- Dr. Kenneth Furton, Florida International University (FIU)
- Dr. Nathaniel Hall, Texas Tech University (TTU) Dept. of Animal & Food Sciences
- Dr. Gerardo Gamez, Texas Tech University (TTU) Dept of Chemistry and Biochemistry
- Dr. Kendra Rumbaugh, Texas Tech University Health Sciences Center, Dept. of Surgery
- Major Jorge Guevara, Colombian National Police, Bogotá, Colombia
- Dr. Kaz Surowiec, Texas Tech University (TTU) Dept. of Chemistry and Biochemistry
- Ms. Amanda Soucey, Worcester Police Department
- Mr. Robby Holbert, Lubbock County Sheriff's Office
- Sgt. Michael Jordan, K9 Unit, Lubbock Police Department
- Cameron Ford, Ford K9 LLC, Las Vegas, Nevada