

Melinda T. Donnell (Hoang), M.P.H.
Toxicologist

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Education and Degrees Earned

- M.P.H., Environmental Health Sciences & Policy, George Washington University, 2017
- B.Sc., Public Health Sciences, University of California, Irvine, 2014
- B.A., Public Health Policy, University of California, Irvine, 2014

Experience Summary (Professional Career)

Paustenbach and Associates
Toxicologist
Orange County, CA
July 2021 – Present

- Consultant specializing in toxicology, occupational health, exposure and risk assessment, and risk characterization.
- Managed multiple projects that evaluated the human health effects from exposure to various chemicals, including asbestos, benzene, crude 4-methylcyclohexanemethanol (MCHM), tricresyl phosphate (TCP), and tertbutylphenyl diphenyl phosphate (tBuTPP with low TPP).
- Managed a project analyzing the hepatic effects of an herbal supplement.
- Assisted in analyzing the human health effects of harmful or potentially harmful chemicals (HPHCs) and flavoring ingredients from the use of electronic nicotine delivery systems (ENDS) as well as the human health effects of nitrosamines (specifically NDMA and NDEA) in pharmaceuticals.

Cardno ChemRisk
Senior Associate Health Scientist II
Aliso Viejo, CA
July 2017 – July 2021

- Consultant specialized in managing litigation casework, performing qualitative exposure assessments, conducting comprehensive literature reviews, and supporting electronic cigarette research.
- Evaluated the health effects and risk of both consumer and occupational exposures to a wide variety of chemicals, including asbestos, talc, diacetyl, 2,3-pentanedione, 2,3-hexanedione, phthalates, per- and polyfluoroalkyl substances (PFAS), and heavy metals.

ICF
Environmental and Health Sciences Intern
Fairfax, VA
Oct. 2016 – May 2017

- Conducted peer-reviewed literature screenings on multiple chemicals to identify potentially relevant data on exposure, engineering/manufacturing, and environmental fate for EPA to use in drafting a TSCA scoping document.
- Conducted peer-reviewed literature screenings on multiple chemicals to identify health effects in either animals or humans following chemical exposure.
- Identified studies related to the mode of action and disposition (ADME) of multiple chemicals.

George Washington University
Toxicology Graduate Research Assistant
Washington, D.C.
April 2016 – May 2017

- Examined whether EPA's use of the database uncertainty factor (UFD) corresponds to their judgement of the quality of the data underlying an assessment in the U.S. EPA's Integrated Risk Information System (IRIS) file for a chemical.
- Developed a database of 500 chemicals from IRIS.
- Analyzed the relationship between both the presence or absence of the UFD and confidence in the critical study, database, and reference dose (RfD).
- Analyzed the relationship between the magnitude of the UFD applied and stated confidence in the critical study, database, and RfD.

Consumer Product Safety Commission (CPSC)
Student Trainee Biological Sciences, GS-05
Rockville, MD
May 2016 – August 2016

- Compared the Federal Hazardous Substances Act (FHSA) regulatory requirements to the Globally Harmonized System for Hazard Communication (GHS) revisions 3 and 6 for classification and labeling as well as included side-by-side comparisons between other applicable CPSC regulations (e.g., PPPA).
- Analyzed previous acute toxicity tests performed on common household products and created a memo determining their toxicity levels.

Advanced Technologies & Laboratory International, Inc.
Toxicology Research Assistant
Washington, D.C.
March 2016 – May 2016

- Reviewed and evaluated toxicological and pharmacological studies to evaluate the hazards and risks associated with engineered nanomaterials for NIOSH.
- Compiled high quality in vivo and in vitro data on the toxicity of engineered nanomaterials to aid in the development of predictive dose-response models.

Key Projects (Partial List)

Toxicology

1. **Compared the toxicity and risks of a new and old chemical ingredient in turbo oil to determine which formulation was safer for pilots and flight attendants when released into cabin air.** These efforts included evaluating the acute toxicity, repeated dose toxicity, neurotoxicity, reproductive/developmental toxicity, carcinogenicity, mutagenicity/genotoxicity, skin and eye irritation potential, and dermal sensitization of the two chemicals and their isomers.
2. **Assessed the hepatic effects of an herbal supplement.** These efforts included performing a systematic review of toxicological literature on each individual ingredient, preparing toxicological profiles for each ingredient, and evaluating whether the doses taken each day could cause acute liver failure.
3. **Provided general support in multiple research efforts to understand the toxicology, potential risk of exposure, and potential health risk to various personal care and consumer products.** These products included hair dye, shampoo, and conditioners.
4. **Performed multiple research efforts for various electronic cigarette clients in preparation of premarket tobacco application (PMTA) submissions to the FDA.** These efforts included performing a systematic review of toxicological literature, preparing

toxicological profiles, performing Quantitative Structure-Activity Relationship (QSAR) analysis for chemical constituents identified in e-cigarette products, as well as preparing graphical representations of analyzed data for chemicals found in e-cigarette liquids and e-cigarette aerosols.

5. **Performed a systematic review of the scientific literature regarding the effect of anatase titanium dioxide nanoparticles on oxidative stress in mice brain.**

Litigation Support

1. **Asbestos.** Managed litigation support on cases related to potential asbestos exposure from friction products, insulation, and gaskets and packing. Reviewed and interpreted relevant asbestos literature and case-specific materials for use in the preparation of expert reports and testimony. Provided general support for expert witness testimony related to health effects allegedly associated with exposures to asbestos-containing products, including insulation, friction products, electrical products, phenolic molding components, gaskets and packing, joint compound, stucco, and talc. Performed comprehensive reviews and summaries of relevant plaintiff and expert testimony and other applicable case materials. Performed quantitative exposure assessments and the assessment of health risks associated with the use of asbestos-containing electrical products and phenolic molding compounds.
2. **Flavorings (Diacetyl, 2,3-Pentanedione, 2,3-Hexanedione).** Provided support for expert witness testimony related to health effects allegedly associated with exposures to diacetyl used in microwave popcorn production and food flavoring manufacturing industries.

Simulation Studies

1. Assisted in designing and executing an exposure assessment of milk protein in food products that do not list milk on the labels and are labeled as “non-dairy,” “vegan,” or “dairy-free”. Characterized the potential risk of milk-contaminated products to milk-sensitized adults and children upon consumption.
2. Assisted in designing and executing an exposure assessment to measure potential airborne concentrations of pine wood- and corn-based dust produced in consumer products (pet litter) to adhere to Proposition 65 regulations. Estimated daily exposure concentrations under varying product use conditions, and evaluated the potential for any health risk by comparing to available regulatory health benchmark levels.

Peer-Reviewed Publications

1. Massarsky, A., **M. T. Donnell**, E. de Gandiaga, J. S. Kozal, L. Garnick, J. A. Kubitz, S. M. Bartell, and A. D. Monnot. 2022. Critical evaluation of ECOSAR and E-FAST platforms to predict ecological risks of PFAS. *Environmental Advances*. 8:100221.

2. Massarsky, A., **M. T. Donnell**, N. R. Binczewski, K. Chan, D. Dinh, J. L. Bare, and K. M. Unice. (2022). Methodology for exposure and health risk screening of phthalates potentially present in fabric face coverings. *Human and Ecological Risk Assessment: An International Journal*. 28(1):184-204.
3. Massarsky, A., J. A. Parker, **M. T. Donnell**, E. S. Fung, & K. M. Unice (2022). Critical evaluation of ToxCast-Reactome predicted toxicity pathway correspondence of the human liver HepG2 activity profile with observed PFOA and PFOS hazards. *Computational Toxicology*, 100212.
4. Yang, L. G., R. K. Brewster, **M. T. Donnell**, and R. N. Hirani. (2021). Risk characterization of milk protein contamination in milk-alternative ice cream products sold as frozen desserts in the United States. *Food Additives & Contaminants: Part A*, doi: 10.1080/19440049.2021.1989496.
5. Fung, E. S., D. A. Drechsel, K. M. Towle, **M. T. Hoang**, R. M. Novick, C. Poteete, D. J. Paustenbach, and A. D. Monnot. (2018). Screening-level assessment of personal care product constituents using publicly available data. *Cosmetics*, 5(2):38. doi: 10.3390/cosmetics5020038.
6. Wright, D., **M. Hoang**, A. Sofine, J. Silve, and R. Schwarzkopf. (2017). Pain catastrophizing as a predictor for postoperative pain and opiate consumption in total joint arthroplasty patients. *Archives of Orthopaedic and Trauma Surgery*, 137(12): 1623-1629.
7. Schwarzkopf, R., T. Zamansani, **M. Hoang**, and T. Bridgeman. (2016). The effect of a clinical pathway strategy for managing care in total joint replacement: The impact on perioperative outcomes. *Journal of Clinical & Experimental Orthopaedics*, 2:11. doi: 10.4172/2471-8416.100011.
8. Schwarzkopf, R., D. Phan, **M. Hoang**, S. Ross, and D. Mukamel. (2014). Do patients with income-based insurance have access to total joint arthroplasty? *The Journal of Arthroplasty*, 29(6): 1083-1086.
9. Sharareh, B., N. Le, **M. Hoang**, and R. Schwarzkopf. (2014). Factors determining discharge destination for patients undergoing total joint replacement. *The Journal of Arthroplasty*, 29(7): 1355-1358.

Presentations at Scientific Conferences

1. **Donnell, M. T.**, A. Massarsky, E. de Gandiaga, J. S. Kozal, L. Garnick, S. M. Bartell, J. A. Kubitz, and A. D. Monnot. Using E-FAST platform to predict human exposure to PFAS. Virtual Poster Presentation at the 2021 Society of Toxicology (SOT) Annual Meeting. March 12-26, 2021.
2. **Hoang, M.** and G. Gray. The effect of anatase titanium dioxide nanoparticles via intranasal instillation on oxidative stress in mice brain: A systematic review. GW Research Days 2017. Washington, D.C.

3. **Hoang, M.** and G. Gray. Understanding the database uncertainty factor (UFD). Society for Risk Analysis, December 11-15, 2016. San Diego, CA.

Published Abstracts

1. Massarsky, A., J. A. Parker, L. Gloekler, **M. T. Donnell**, N. R. Binczewski, J. S. Kozal, T. McKnight, A. Patterson, and M. L. Kreider. Assessing Potential Human Exposure to PFAS from Leave-In Dental Products. Society of Toxicology, March 27-31, 2022. San Diego, CA.
2. Gibbs, K., R. Hwang, D. Dinh, **M. Donnell**, S. More, and E. Fung. Critical Evaluation of Chemicals Leached from PET and Recycled PET Beverage Containers into Beverages. Society of Toxicology, March 27-31, 2022. San Diego, CA.
3. Brown, S. E., J. J. Heywood, G. Abele, **M. T. Donnell**, D. W. Brew, and D. J. Paustenbach. Investigation of Possible Cancer Risks Associated with Closed-System ENDS. Society of Toxicology, March 27-31, 2022. San Diego, CA.
4. Paustenbach, D. J., G. R. Abele, J. J. Heywood, and **M. T. Donnell**. A Methodology for Estimating 4-ABP Dermal Intake via Contaminated Consumer Products. Society of Toxicology, March 27-31, 2022. San Diego, CA.
5. Abele, G. R., J. J. Heywood, S. E. Brown, **M. T. Donnell**, D. W. Brew, and D. J. Paustenbach. Assessment of Possible Cardiovascular Risks Associated with Closed-System Electronic Nicotine Delivery System (ENDS) Aerosols. Society of Toxicology, March 27-31, 2022. San Diego, CA.
6. **Donnell, M. T.**, A. Massarsky, E. de Gandiaga, J. S. Kozal, L. Garnick, S. M. Bartell, J. A. Kubitz, and A. D. Monnot. Using E-FAST platform to predict human exposure to PFAS. Society of Toxicology, March 12-26, 2021.
7. Massarsky, A., **M. T. Donnell**, E. de Gandiaga, J. S. Kozal, L. Garnick, S. M. Bartell, J. A. Kubitz, and A.D. Monnot. Using ECOSAR and E-FAST platforms to predict ecological risks of PFAS. Society of Toxicology, March 12-26, 2021.
8. De Gandiaga, E., A. Hazell, A. Sharma, **M. Donnell**, A. Massarsky, A. Schulte, A. Bernal, and A. K. Madl. Exposure and human health risk of metals from electronic nicotine delivery systems. Society of Toxicology, March 12-26, 2021.
9. **Hoang, M.**, K. Towle, A. Monnot, and E. Fung. Call for a multi-product testing strategy to evaluate potential adverse dermal effects. Society of Toxicology, March 15-19, 2020. Anaheim, CA.
10. Fung, E., K. Towle, **M. Hoang**, and A. Monnot. A skin sensitization risk assessment framework for evaluation of metal contamination in personal care products. Society of Toxicology, March 15-19, 2020. Anaheim, CA.
11. Massarsky, A., J. Parker, **M. Hoang**, E. Fung, and K. Unice. Using ToxCast and Reactome to evaluate toxicity of PFAS. Society of Toxicology, March 15-19, 2020. Anaheim, CA.
12. Gloeker, L., L. Liang, S. More, N. Binczewski, **M. Hoang**, and A. Madl. Volatile organic compounds measured in U.S. indoor residential air from smoking and nonsmoking

homes and implications for public health. Society of Toxicology, March 15-19, 2020. Anaheim, CA.

13. Yang, L., R. Brewster, **M. Hoang**, and R. Novick. Exposure assessment of milk protein in non-dairy or vegan ice cream substitutes – are non-dairy or vegan products safe to populations with milk allergy? Society of Toxicology, March 10-14, 2019. Baltimore, MD.
14. **Hoang, M.**, E. Fung, D. Drechsel, K. Towle, C. Poteete, D. Paustenbach, and A. Monnot. Screening-level safety assessment of personal care product constituent safety using publicly available data. Society of Toxicology, March 11-15, 2018. San Antonio, TX.
15. Schwarzkopf, R., **M. Hoang**, and D. Wright. Pain catastrophizing as a predictor for post-operative pain and opiate consumption in total joint arthroplasty patients. American Association of Hip and Knee Surgeons, November 1, 2016. Dallas, TX.
16. Schwarzkopf, R., D. Phan, **M. Hoang**, S. Ross, and D. Mukamel. Do patients with income-based insurance have access to total hip arthroplasty? Western Orthopaedic Association, July 30-August 2, 2014. Big Island, HI.
17. Sharareh, B., N. Le, **M. Hoang**, and R. Schwarzkopf. Factors determining discharge destination for patients undergoing total joint replacement. Western Orthopaedic Association, July 30-August 2, 2014. Big Island, HI.
18. Schwarzkopf, R., D. Phan, **M. Hoang**, S. Ross, and D. Mukamel. Do patients with income-based insurance have access to total hip arthroplasty? American Orthopaedic Association, 2014. Montreal.
19. Schwarzkopf, R., D. Phan, **M. Hoang**, D. Mukamel, and S. Ross. Do patients with income-based insurance have access to total hip arthroplasty? American Association of Hip and Knee Surgeons, November 8-10, 2013. Dallas, TX.

Magazine Articles

1. Improving the Safety of Meal Kits: A Holistic Approach. Food Safety Magazine. October 18, 2021. <https://www.food-safety.com/articles/7395-improving-the-safety-of-meal-kits-a-holistic-approach>

Presentations at Legal Conferences

1. Glyphosate: Emerging Litigation Trends. Perrin Conferences. May 23, 2019.

Certificates

- Hazard Analysis & Critical Control Point, January 2021
- FSPCA Preventive Controls for Human Food, February 2021

Membership and Service to Professional Societies

- Society of Toxicology (SOT) (Associate member)
 - Member of Sustainable Chemicals through Contemporary Toxicology, Exposure, Food Safety, and Risk Assessment Specialty Sections
- Society for Risk Analysis (SRA)
- Product Stewardship Society