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Professional Profile

Ms. Chrysostomou is a board-certified toxicologist with over 9 years of experience conducting toxicological human health hazard assessments in the fields of pesticides, industrial chemicals, food ingredients and additives, consumer products, and pharmaceutical ingredients. In her current capacity with Exponent's Chemical Regulation & Food Safety she works as a regulatory toxicologist preparing chemical assessments, toxicological risk assessments, dose-response assessments, benchmark dose modeling analysis, and quantitative structure-activity relationship (QSAR) analysis for food ingredients, additives and contaminants, consumer products, pesticides, and industrial chemicals. She is experienced in reviewing human health safety data for food additives under FDA's generally recognized as safe (GRAS) notification program, food contact substances, and food ingredients, and preparing dossiers for regulatory submission to FDA, EFSA, and JECFA...

Ms. Chrysostomou has experience in placing, monitoring, and interpreting toxicological studies for food ingredients and chemicals, including products under FIFRA and TSCA, and prepares data evaluation reports and OECD study summaries. She is familiar with U.S. EPA toxicological testing requirements and waiver guidelines as well as weight of evidence evaluations for pesticides.

In her previous capacities, Ms. Chrysostomou held positions as a toxicologist subject matter expert supporting deployment-related exposure and occupational health policy within the U.S. Department of Defense, focusing on burn pit and PFAS exposures. She also has previous experience in potent compound safety assessment and occupational health categorization for active pharmaceutical ingredients.

Ms. Chrysostomou's educational background includes a Master of Science in Toxicology from Colorado State University and a Bachelor of Science in Psychology with a focus in premedical studies from University of Maryland. During her studies, she focused on clinical trial management, clinical data collection and analysis, and regulatory compliance.

Academic Credentials & Professional Honors

M.S., Toxicology, Colorado State University, 2017

B.S., Psychology, University of Maryland, College Park, 2014

Prior Experience

Toxicologist/Analyst, Alexa Research & Engineering, 2019-2022

Associate Toxicologist, Affygility Solutions, 2018-2019

Postbaccalaureate Intramural Research Fellow, National Institutes of Health, 2015-2016

Research Assistant, Veterans Affairs Medical Center, 2012-2016

Professional Affiliations

National Capital Area Chapter of Society of Toxicology, Secretary, 2026-2028

American College of Toxicology, 2023 – Present

Institute of Food Technologists, 2023 – Present

Toxicology Forum, 2022 – Present

Society of Toxicology, 2017 – Present

Languages

Greek

Spanish

Publications

Chrysostomou, P. P., Freeman, E., Murphy, M. M., Chaudhary, A., Siddiqui, N., & Daoust, J. (2024). A toxicological assessment of Ganoderma lucidum and Cordyceps militaris mushroom powders. Frontiers in toxicology, 6, 1469348. https://doi.org/10.3389/ftox.2024.1469348

Chrysostomou, P.P., Freeman, E.L., Murphy, M.M., Pereira, R., Esdaile, D.J., Keohane, P. (2024). A toxicological assessment of spermidine trihydrochloride produced using an engineered strain of Saccharomyces cerevisiae. Food and Chemical Toxicology, Volume 184, 114428. ISSN 0278-6915. https://doi.org/10.1016/j.fct.2023.114428

Turbitt, E., Chrysostomou, P., Heidlebaugh, A., Peay, H., Nelson, L & Biesecker, B. (2018). Randomized controlled study of two consent interventions for participating in NIH genome sequencing studies. European Journal of Human Genetics. *Joint first authorship

Zaheer, M., Chrysostomou, P., & Papademetriou, V. (2016). Hypertension and Atherosclerosis: Pathophysiology, Mechanisms and Benefits of BP Control. In Hypertension and Cardiovascular Disease (pp. 201-216). Springer International Publishing.

Raman, V.K., Chrysostomou, P., & Papademetriou, V. (2016) Renal Denervation: Back to the Future? Journal of Kidney; 2:125

Chrysostomou, P., Lodish, M.B., Turkbey, E., Papadakis, G.Z., & Stratakis, C.A. (2016) Use of 3-D dimensional volumetric modeling of adrenal gland size in patients with primary pigmented nodular adrenocortical disease. Hormone and Metabolic Research; 48(04): 242-246.

Chrysostomou, P., Lodish, M.B., Turkbey, E., & Stratakis, C.A. (2014) Use of 3-D dimensional volumetric modeling of adrenal gland size in patients with primary pigmented nodular adrenocortical disease [Abstract]. In Endocrine Hypertension & Cushing's (MON-0775). Endocrine Society.

Presentations

Classification of Carcinogenic, Mutagenic, and Reprotoxic Chemicals [Presentation] (2023). Society of

Chemical Hazard Communication Annual Meeting, 2023.

DoD Exposure Monitoring Strategy [Presentation] (2021). Joint DoD-VA Deployment Health Working Group.

National Defense Authorization Act, Health Affairs Related Policy [Presentation] (2020, 2021, 2022).

Project Experience

Evaluation of toxicological data from literature, toxicological reports, publicly available information, and internal databases for fragrance compounds. Identification of NOAELs for oral repeated dose systemic toxicity, acute and subchronic inhalation toxicity and reproductive toxicity for use in threshold of toxicological concern (TTC) evaluations.

Publication of manuscripts on toxicological safety studies assessing the safety of food additives in support of FDA GRAS submission. Expertise in assessing safety of fungi, and products made using precision fermentation techniques.

Toxicological support for FDA GRAS and food contact submissions. Included representation of client at FDA meeting to discuss toxicological database, presentation of genotoxic weight of the evidence evaluations to FDA, participation in GRAS panel meetings, preparation of safety data sections of GRAS dossiers, and identification of surrogate compounds for toxicological assessment.

Preparation of safety data sections of dossiers for regulatory submission to JECFA and EFSA for food ingredient/additive. Included preparation of comprehensive toxicological profiles for substances with limited safety data, and conducting QSAR analysis to identify surrogate substance for read across.

Safety literature review to investigate whether contaminants of concern in food warrant a lowered toxicological threshold that may lead to changing regulatory action levels. Human health evaluation of contaminants and impurities detected in consumer products and food.

QSAR modeling conducted using DEREK and OECD Toolbox modeling to support chemical safety assessments and determination of toxicological relevance of impurity and metabolite of concern relevance for FIFRA registration.

Weight of evidence evaluations and waiver submissions for toxicological data requirements under 40CFR158.

Chemical specific adjustment factor (CSAF) based on human, rat, dog and mouse pharmacokinetic data in support of EPA FIFRA pesticide reevaluation.

Waivers from testing requirements under FIFRA based on review and evaluation of toxicological database, review of similar compounds, and point of departure and margin of safety in dietary and occupational health risk assessments.

Review, evaluation, design and oversight of toxicological animal testing for pesticide actives to support EPA FIFRA registration.

Toxicology and human health exposure assessment support for PMN and LVE submissions under amended TSCA (2017).

Health-based exposure limit derivation to calculate carry over contamination limits in qualitative risk assessment and cleaning validation for the manufacture of a veterinary product.

Successful AICIS Inventory change request for fragrance use concentration in cosmetic and household end-use products from 0.05% to 0.2-22.6%.

Additional Education & Training

Genotoxicity Workshop, Inotiv, April 2025

TERA Dose-Response Assessment Boot Camp Course, November 2023

Bayesian Benchmark Dose Modeling Workshop, October 2023

Generalized Read-Across (GenRA) Virtual Training, U.S. Environmental Protection Agency's Center for Computational Toxicology and Exposure, May 2023

Toxicology Excellence in Risk Assessment, Dose-Response Assessment Boot Camp Course, November 2022

HESI DART Workshop: Interpretation of Developmental and Reproductive Toxicity in Regulatory Contexts and Frameworks, October 2022

Consumer Product Safety Commission, Household Consumer Products Association: A-Z and Beyond, September 2022