

Exponent®
Engineering & Scientific Consulting

Sarah Dahlberg, M.S., RAC-Drugs

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Professional Profile

Ms. Dahlberg is an interdisciplinary health scientist specializing in the integration of epidemiologic, clinical, toxicologic, and mechanistic evidence to conduct weight-of-evidence assessments, evaluate causation, and characterize human health risks, in support of litigation support for legal counsel and scientific and regulatory challenges faced by life science clients.

Ms. Dahlberg has extensive experience leading and conducting systematic literature reviews and meta-analyses under multiple scientific and regulatory frameworks including PRISMA, NTP OHAT, and EPA epidemiology evaluation guidance for evidence integration. Her work has been utilized to support regulatory submissions to the FDA, formed the scientific basis for expert reports in pharmacoepidemiology litigation matters, and has been published in the peer-reviewed literature. She routinely conducts critical appraisals of epidemiologic study design and data quality, including study quality and risk-of-bias evaluations consistent with U.S. EPA guidance, and applies quantitative and qualitative methods to synthesize complex scientific evidence. She is experienced in applying Bradford Hill criteria and conducting general and specific causation analyses consistent with regulatory and legal evidentiary standards.

Ms. Dahlberg's human health risk assessment experience includes evaluating hazards and exposures to a variety of chemical agents, such as volatile and semi-volatile organic compounds (e.g., benzene, methacrylates, toluene), metals / metalloids (e.g., lead, arsenic, cadmium, nickel), perflourinated compounds (e.g., perfluorooctanoic acid or PFOS), silicates (e.g., asbestos, crystalline silica), BPA, and pesticides (e.g., atrazine), across occupational, environmental, and consumer product exposure scenarios. She is well-versed at applying the “Key Characteristics” framework adopted by the International Agency for Research on Cancer (IARC) for hazard assessment of chemicals.

She has also evaluated US FDA and EU EMA regulatory requirements for drug product lifecycles and has provided consulting services to life science clients on clinical development strategy, regulatory submissions, and post-market surveillance, including adverse drug event assessment using pharmacovigilance databases (e.g. FAERS).

Prior to joining Exponent, Ms. Dahlberg received her M.S. in environmental health sciences with a concentration in toxicology from UC Berkeley School of Public Health, and B.S./B.A. degrees in biology and chemistry, respectively from Pepperdine University.

Academic Credentials & Professional Honors

M.S., Environmental Health Sciences, University of California, Berkeley, 2020

B.A., Chemistry, Pepperdine University, 2018

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B.S., Biology, Pepperdine University, 2018

Licenses and Certifications

RAC-Drugs Certified Professional

Prior Experience

Graduate Student Researcher, Superfund Research Group, UC Berkeley, 2019-2020

Graduate Student Instructor, Department of Environment, Science, Policy and Management, UC Berkeley, 2019

Graduate Student Instructor, Department of Molecular and Cellular Biology UC Berkeley, 2019

Professional Affiliations

Society of Toxicology (Associate Member), 2021-present

International Society of Pharmacoepidemiology, 2025-Present

International Society of Pharmacovigilance, 2024-Present

• Women's Medicines Special Interest Group

• Real-World Evidence and Big Data Special Interest Group

• PV in the Community Special Interest Group

Languages

Mandarin Chinese

Publications

Morris-Schaffer, K., Kocabas, N.A., Hearon, S., Higgins, L.G., Dahlberg, S., Faulhammer, F., Freeman, E., Cubello, J. and Rooseboom, M., 2026. "A Weight of Evidence Evaluation on the Immunosuppressive Potential of Xylene," Regulatory Toxicology and Pharmacology, p.106082.

Morris-Schaffer, K., Farrington, H., Dahlberg, S., Llewellyn, C., Freeman, E., 2025. "A systematic literature review and weight of evidence evaluation of the genotoxicity potential of atrazine," Journal of Toxicology and Regulatory Policy, 1(2), pp. 1 — 39.

Morris-Schaffer, K., Dahlberg, S., Johann, E., Murphy, M.M., Tran, N.L. and Freeman, E.L., 2025. "Preclinical safety evaluation of sodium L-methylfolate," Food and Chemical Toxicology, p.115822.

Zhang L, Louie A, Rigutto G, Guo H, Zhao Y, Ahn S, Dahlberg S, Sholinbeck M, Smith MT. A systematic evidence map of chronic inflammation and immunosuppression related to per- and polyfluoroalkyl substance (PFAS) exposure. Environ Res. 2023 Mar 1;220:115188. doi: 10.1016/j.envres.2022.115188. Epub 2022 Dec 30. PMID: 36592815; PMCID: PMC10044447.

Dahlberg S, Chang ET, Weiss SR, Dopart P, Gould E, Ritchey ME. Use of Contrave, Naltrexone with Bupropion, Bupropion, or Naltrexone and Major Adverse Cardiovascular Events: A Systematic Literature

Review. Diabetes Metab Syndr Obes. 2022 Sep 29;15:3049-3067. doi: 10.2147/DMSO.S381652. PMID: 36200062; PMCID: PMC9529009.

Rana I, Dahlberg S, Steinmaus C, Zhang L. Benzene exposure and non-Hodgkin lymphoma: a systematic review and meta-analysis of human studies. Lancet Planet Health. 2021 Sep;5(9):e633-e643. doi: 10.1016/S2542-5196(21)00149-2. Epub 2021 Aug 25. PMID: 34450064; PMCID: PMC9109598.

Castriota F, Rieswijk L, Dahlberg S, La Merrill MA, Steinmaus C, Smith MT, Wang JC. A State-of-the-Science Review of Arsenic's Effects on Glucose Homeostasis in Experimental Models. Environmental Health Perspectives 2020; 128 (1):16001.

Presentations

Higgins LG, Morris-Schaffer K, Hearon S, Dahlberg S, Freeman E, Faulhammer F, Agyun Kocabas N, Rooseboom M. A Systematic Review and Weight of Evidence Evaluation on the Immunosuppressive Potential of Xylene. Presented at the Society of Toxicology Meeting in San Diego, California. March 2026.

Dahlberg S, Orzechowski A. Assessing Study Feasibility Using Trends in the FDA PMR/PMC Database: 2020-2024. Presented at the International Society of Pharmacoepidemiology Meeting in Washington, D.C. August 2025.

Orzechowski A, Dahlberg S. Postmarketing Requirements for Accelerated Approvals: An Analysis of Status, Therapeutic Areas, and Regulatory Designations. Presented at the International Society of Pharmacoepidemiology Meeting in Washington, D.C. August 2025.

Dahlberg S, Orzechowski A, Cotter M, Horowicz-Mehler N. Optimizing Drug Market Exclusivity in the US and EU Markets. Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Meeting in Atlanta, Georgia. May 2024.

Orzechowski A, Dahlberg S, Cotter M, Horowicz-Mehler N. Prescription Nutraceutical Clinical Evidence Requirements in the Treatment of Depression: Comparing U.S. and EU Guidance for Phase II and III Clinical Trials. Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Meeting in Atlanta, Georgia. May 2024.

Rigutto G, Louie A, Smith M, Guo H, Zhao Y Dahlberg S, Sholinbeck M, and Zhang LP. Identifying Studies on the Key Characteristics of Carcinogens Related to Chronic Inflammation and Immunosuppression. Poster presentation, Superfund Research Program Annual Conference, 2020.

Dahlberg S, Louie A, Nguyen P, Ranjbar K. Risk Assessment of Glycidyl Methacrylate: A Cause for Concern. Poster presentation, Northern California Society of Toxicology Spring Symposium, South San Francisco, CA, 2019.

Louie A, Dahlberg S. An Analysis of Benzene Exposure and B-cell Lymphoma. Poster presentation, Northern California Society of Toxicology Spring Symposium, South San Francisco, CA, 2019.

Project Experience

Litigation Support & Expert Consulting

Contributed to expert reports in pharmacoepidemiology litigation matters, providing scientific opinions on general and specific causation, utilizing Bradford-Hill criteria for causal inference.

Conducted PRISMA-adherent systematic literature reviews and meta-analyses to synthesize the epidemiologic and toxicologic evidence base for chemical agents and pharmaceutical products in the

context of litigation, including critical appraisal of study design, bias, confounding, and biological plausibility.

Assessed the adequacy of a pharmaceutical company's serious adverse event reporting with Good Pharmacovigilance Practices (GVP) compliant with International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH), including extensive review of Periodic Benefit-Risk Evaluation Reports and FAERS data on the alleged adverse event of interest.

Pharmacoepidemiology Consulting

Conducted PRISMA-adherent systematic literature reviews and critically assessed the peer-reviewed literature of pharmaceutical contaminants and potential health effects, as well as various pharmaceutical drugs across different drug classes and potential adverse side effects.

Assessed the safety of pharmaceutical agents across multiple drug classes and health outcomes (cardiovascular, oncologic, gastrointestinal, renal, immunologic) in general and vulnerable populations, including pregnant individuals, pediatric, and geriatric populations.

Supported the regulatory submission of a prescription-to-OTC switch, involving comprehensive systematic literature reviews for identified safety topics of interest, as well as the integration of historical safety data from various pharmacovigilance databases (e.g. FAERS, VigiBase).

Assisted pharmaceutical clients with the development and execution of a DELPHI study to develop a novel clinical assessment tool for dermatologic drug response.

Assessed post-marketing study (PMR/PMC) feasibility against FDA and EMA requirements for newly approved pharmaceutical products across women's health and gastrointestinal indications, including analysis of real-world evidence (RWE) applicability.

Evaluated regulatory requirements and estimated maximum market exclusivity periods for new drug applications in both the US and EU markets.

Human Health Risk Assessment

Performed full product life-cycle health risk assessment of materials commonly used in consumer product manufacturing, consistent with established regulatory guidance, including EPA's Framework for Human Health Risk Assessment to Inform Decision Making.

Conducted health hazard evaluations for FDA-regulated products due to possible benzene contamination, assessing the acute and chronic health risks associated with exposure.

Prepared toxicological monographs compliant with International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) to produce tenable permissible daily exposure (PDE) levels for pharmaceutical residual impurities across oral and parenteral routes of exposure.

Conducted testing to understand the potential for known dermal sensitizers to leach from wearable products during use. Used leach data in a model to predict allergic contact dermatitis elicitation risk. Utilized common chemical databases (e.g. PubChem, ECHA, ATSDR) to identify potential dermal sensitizers and dermal irritants in consumer products.

Conducted Proposition 65 evaluations to assess potential exposure to metals (e.g., arsenic, cadmium, lead) and semi-volatile organic compounds (e.g. methylene diphenyl diisocyante) during various consumer product use scenarios. Example products include appliances and tableware.

Evaluated reproductive toxicity and developmental neurotoxicity outcomes reported in published studies concerning a pesticide that is undergoing review by the Proposition 65 Developmental and Reproductive Toxicant Identification Committee (DARTIC).

Simulated the use of a colored cosmetic product and quantified potential personal breathing zone exposures to respirable crystalline silica. Contextualized data in terms of lung cancer risk, using established regulatory guidance.

Additional Education & Training

Managing the COVID-19 Pandemic, UC Berkeley, 2020

Contact Tracing for COVID-19, Johns Hopkins University, 2020

Peer Reviews

Archives of Toxicology

Environment International

Environmental Research

Toxicology and Industrial Health

International Archives of Occupational and Environmental Health

Journal of Toxicology and Environmental Health, Part B: Critical Reviews

Ecotoxicology and Environmental Safety