

Laura E. Kerper, Ph.D.

Managing Toxicologist

lkerper@gradientcorp.com



Dr. Kerper is a toxicologist with experience in human exposure and risk assessment. Her primary responsibilities include the analysis of chemical toxicity data and the evaluation of potential human health risks in response to specific environmental chemical exposures. She has particular expertise in the risk assessment of perfluorinated chemicals, metals, solvents, and asbestos. Before joining Gradient, Dr. Kerper was a member of the adjunct faculty of the University of Rochester, where she taught toxicology in the M.S. Program in Environmental Studies.

Her postdoctoral work at the University of Rochester focused on mechanisms of heavy metal transport, especially lead and cadmium, across cell membranes. Dr. Kerper's predoctoral research at the University of Rochester was an investigation of methylmercury transport across the blood-brain barrier.

Representative Projects

Evaluation of Perfluorooctane Sulfonate (PFOS) Risk: Assessed the toxicological significance of exposure to PFOS in drinking water and in consumption of fish potentially containing PFOS. Provided technical oversight for analysis of the literature regarding toxicology, human health effects, and chemical and environmental characteristics of PFOS, and the historical state of knowledge of these topics.

Risk Assessment of Hexavalent Chromium: Provided technical oversight for an assessment evaluating the risks of exposure to hexavalent chromium in soil. Was responsible for risk calculations for potentially exposed individuals, evaluation of the association between chromium and health effects, and analysis of epidemiology studies.

Comments on Regulatory Agency Health Documents for PFOA and PFOS: Provided written comments on US EPA's Health Effects Documents for Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA), and on the National Toxicology Program's draft systematic review of immunotoxicity associated with PFOA and PFOS. Analyzed the scientific validity of the agencies' approaches in determining the risks and hazards for both chemicals.

Weight-of-Evidence Evaluation of Naphthalene Carcinogenicity: Reviewed and analyzed the literature on naphthalene regarding disposition, metabolism, genotoxicity, experimental studies, epidemiology, and susceptible populations. Co-authored a manuscript incorporating these topics in a weight-of-evidence evaluation.

Risk Assessment of Asbestos Exposure in Electricians: Managed a series of risk assessments evaluating the risk of mesothelioma and lung cancer in individuals exposed to asbestos-containing electrical products. Reviewed and analyzed the literature regarding studies of epidemiology, exposure, and alternative causation. Co-authored a manuscript on the risk of mesothelioma and lung cancer in electricians.

Analysis of Solvent Exposure Association with Non-Hodgkin Lymphoma: Managed a review and assessment of the scientific literature addressing associations between solvents, especially benzene and non-Hodgkin lymphoma (NHL), for a case involving a workers' compensation claim. Compiled epidemiology study data for occupational exposures and NHL.

Areas of Expertise

- Toxicology
- Risk Assessment
- Perfluorinated Chemicals
- Heavy Metals
- Solvents
- Asbestos

Education

Ph.D., Toxicology, University of Rochester

M.S., Toxicology, University of Rochester

B.A., Environmental Science, State University of New York - Purchase College

Selected Publications

Pizzurro, DM; Seeley, M; **Kerper, LE**; Beck, BD. 2019. "Interspecies differences in perfluoroalkyl substances (PFAS) toxicokinetics and application to health-based criteria." *Regul. Toxicol. Pharmacol.* 106:239-250. doi: 10.1016/j.yrtph.2019.05.008.

Kerper, LE; Lynch, HN; Beck, BD; Pizzurro, DM; Seeley, M. 2019. "Considerations for Grouping Different PFAS Together to Develop Guidance Values." Poster # 1870/P253. Presented at the Society of Toxicology (SOT) 58th Annual Meeting, Baltimore, MD, March 10-14.

Kerper, LE; Lynch, HN; Zu, K; Tao, G; Utell, MJ; Goodman, JE. 2015. "Systematic Review of Pleural Plaques and Lung Function." *Inhal. Toxicol.* 27(1):15-44. doi: 10.3109/08958378.2014.981349.

Bailey, LA; **Kerper, LE**; Rhomberg, LR. 2015. "Naphthalene." In *Hamilton and Hardy's Industrial Toxicology (Sixth Edition)*. (Eds.: Harbison, RD; Bourgeois, MM; Johnson, GT), John Wiley & Sons, Inc., Hoboken, NJ, p663-668.

Goodman, JE; Peterson, MK; Bailey, LA; **Kerper, LE**; Dodge, DG. 2014. "Electricians' chrysotile asbestos exposure from electrical products and risks of mesothelioma and lung cancer." *Regul. Toxicol. Pharmacol.* 68(1):8-15.



Science and Strategies for Health and the Environment www.gradientcorp.com

One Beacon Street, 17th Floor, Boston, MA 02108 | 617-395-5000