

Exponent®
Engineering & Scientific Consulting

Lisa Corey, Ph.D., DABT

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Professional Profile

Dr. Corey is a board-certified toxicologist and risk assessor experienced in conducting exposure, toxicological, and human health risk assessments for exposure to chemical and biological agents in air, water, soil, textiles, and food. She has evaluated chemicals including metals and other inorganic substances, volatile organic compounds, endocrine disrupting compounds, pharmaceuticals, alcohol and recreational drugs, pesticides, solvents, organophosphates, fuels, emissions from combustion processes, and nanomaterials.

Dr. Corey has presented her work at national and international conferences, met with and presented to state and federal agencies, conveyed information during public meetings, and has served as an expert witness. She excels in communicating complex scientific information to a variety of audiences. She has also served on and chaired the US EPA Human Studies Review Board and currently serves on the Board of Directors of the American Board of Toxicology.

Academic Credentials & Professional Honors

Ph.D., Environmental Health/Toxicology, University of Washington, 2008

M.S., Environmental Health/Toxicology, University of Washington, 2004

B.S., Cell and Molecular Biology, University of Washington, 1998

Licenses and Certifications

Diplomate of the American Board of Toxicology (DABT)

Prior Experience

Toxicologist, Intertox, 2004-2025

Director of Operations, Intertox, 2020-2025

Research Biologist, Corus Pharma, 2004-2008

Research Assistant, University of Washington, 2002-2008

Blood Collection Specialist, Puget Sound Blood Center, 1998-2002

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Professional Affiliations

2023-present, American Board of Toxicology Board of Directors

2018-2024, US EPA Human Studies Review Board, Board Member; Chair 2022-2024

2010-present, Society of Toxicology, Full Member

2004-present, Pacific Northwest Association of Toxicologists

Publications

Lafranconi M, Anderson J, Budinsky R, Corey L, Forsberg N, Klapacz J, LeBaron MJ. An integrated assessment of the 1,4-dioxane cancer mode of action and threshold response in rodents. Regul Toxicol Pharmacol. 2023.

Lafranconi M, Budinsky R, Corey L, Klapacz J, Crissman J, LeBaron M, Golden R, Pleus R. A 90-day drinking water study in mice to characterize early events in the cancer mode of action of 1,4-dioxane. Regul Toxicol Pharmacol. 2021.

Pleus R.C. and Corey L.M. Environmental exposure to perchlorate: A review of toxicology and human health. Toxicol Appl Pharmacol. 2018.

Bruce G.M., Corey L.M., Pearce E.P., Braverman L.E., Pleus R.C. Determination of Thresholds of Radioactive Iodine Uptake Response with Clinical Exposure to Perchlorate: A Pooled Analysis. J Occup Environ Med. 2017.

Corey L.M., Bell G.P., Pleus R.C. Exposure of the US Population to Nitrate, Thiocyanate, Perchlorate, and Iodine Based on NHANES 2005–2014. Bull Environ Contam Toxicol. 2017.

Bruce G.M., Corey L.M., Mandel J.H., Pleus R.C. Urinary Nitrate, Thiocyanate, and Perchlorate and Thyroid Endpoints Based On NHANES 2001-2002. J Occup Environ Med. 2013.

Linkov I., Satterstrom F.K., Corey L.M. Nanotoxicology and nanomedicine: making hard decisions. Nanomedicine 2008.

Corey L.M. Are nanomaterials another environmental worry? Daily Journal of Commerce. 2007 Environmental Outlook Special Section 2007.

Corey L.M., Baker C., Luchtel D.L. Heart Rate Variability in the Apolipoprotein E Knockout Mouse in Response to Seattle Particulate Matter. Journal of Toxicology and Environmental Health, Part A. 2006.

Chow J.C., Watson J.G., Savage N., Solomon C.J., Cheng Y., McMurry P.H., Corey L.M., Bruce G.M., Pleus R.C., Biswas P., Wu C. Critical Reivew: Nanoparticles and the Environment. Air & Waste Management Association 2005.

Presentations

Lafranconi M, J. Anderson, Budinsky R, Corey L, N. Forsberg, Klapacz J, LeBaron M. 1,4-Dioxane Cancer Mode of Action is Dependent on Proliferative Processes. Society of Toxicology, Nashville, TN. March 23, 2023.

Lafranconi M, Budinsky R, Corey L, Klapacz J, Crissman J, LeBaron M, Golden R, Pleus R. Exposure to 1,4-dioxane above the Metabolic Saturation Threshold Induces a Mitogenic Key Element in the Mouse Liver Cancer Mode of Action. Society of Toxicology. Virtual Materials available online May 31, 2020.

Corey L.M., Shim J., McGinley M. Perceptions of Odor: Applying odor parameter data to toxicological risk assessments. AIHce, Minneapolis, MN. May 18-22, 2020.

Bai N., Kido T., Corey L.M., Laher I., Rosenfeld M.E., van Eeden S.F. Effect of chronic diesel exhaust particle inhalation on nitric oxide production in mouse aorta. American Thoracic Society International Meeting, Toronto, Ontario, Canada. May 16-21, 2008.

Corey L.M., Baker C., Stewart J., Luchtel D.L., Kavanagh T.J., Kaufman J.D., Rosenfeld M.E. Dose Independent Changes in Heart Rate and Heart Rate Variability Following Inhalational Exposure to Diesel Exhaust. Society of Toxicology, Seattle, WA. March 18, 2008.

Corey L.M. Applying nanotoxicology to limit risk. Nano TX ’07, Dallas, TX. October 2, 2007.

Bai N., Suzuki H., Corey L.M., Kido T., Rosenfeld M.E., Laher I., van Eeden S.F. Chronic diesel exhaust particle inhalation induces exaggerated vasocontraction in APOE knockout mouse aorta. 13th World Congress on Heart Disease, Vancouver, Canada. July 30, 2007.

Corey L.M., Baker C., Wilkerson J.H., Neff-LaFord H.D., Luchtel D.L., Kaufman J.D., Kavanagh T.J., Rosenfeld M.E. Inflammatory Response Due to Diesel Exhaust in the Apolipoprotein E Deficient Mouse. American Thoracic Society International Meeting, San Francisco, CA. May 19-23, 2007.

Corey L.M., Baker C., Luchtel D.L., Kaufman J.D., Kavanagh T.J., Rosenfeld M.E. Changes in Heart Rate and Heart Rate Variability in the Apolipoprotein E Deficient Mouse with Exposure to Diesel Exhaust. American Thoracic Society International Meeting, San Francisco, CA. May 19-23, 2007.

Bai N., Suzuki H., Corey L.M., Kido T., Rosenfeld M.E., Laher I., van Eeden S.F. Mechanisms of chronic diesel exhaust particle inhalation-induced exaggerated vasoconstriction in mouse aorta. American Thoracic Society International Meeting, San Francisco, CA. May 19-23, 2007.

Corey L.M., Baker C., Wilkerson J.H., Neff-LaFord H.D., Luchtel D.L., Kaufman J.D., Kavanagh T.J., Rosenfeld M.E. Increases in Plasma Cytokine Levels due to Inhalation of Diesel Exhaust in Older Apolipoprotein E Deficient Mice. American Heart Association Arteriosclerosis Thrombosis and Vascular Biology Meeting, Chicago, IL. April 19-21, 2007.

Corey L.M., Baker C., Peck E.C., Wilkerson J.H., Luchtel D.L., Kaufman J.D., Kavanagh T.J., Rosenfeld M.E. Plasma Cytokine Levels Are Increased in Older Apolipoprotein E Deficient Mice Following Exposure to Diesel Exhaust. Society of Toxicology Annual Meeting, Charlotte, NC. March 25-29, 2007.

Corey L.M., Peterson M.K., Pleus R.C., and Linkov I. Challenges in assessing risks due to nanoparticles. Presented at the Society for Risk Analysis Annual Meeting, Baltimore, MD. November 3-6, 2006

Corey L.M., Peterson M.K., and Pleus R.C. Nanotechnology Environmental Health and Safety (EHS): Current Knowledge and Future Challenges. Presented at the 9th Annual Force Health Protection Conference, Albuquerque, NM. August 6-11, 2006.

Corey L.M., Peterson M.K., and Pleus R.C. Nanotoxicology: Special Considerations for Assessing Risks from Very Small Particles. Presented at the 9th Annual Force Health Protection Conference, Albuquerque, NM. August 6-11, 2006

Corey L.M., Peterson M.K., and Pleus R.C. Developing Nanotechnology Health and Safety Standards. Presented at the 2006 Micro Nano Breakthrough Conference, Vancouver, WA, July 25, 2006.

Pleus, R.C., Bruce, G.M., Snyder, E.M., Snyder, S.A., Corey, L.M. Toxicological Relevance of EDCs and Pharmaceuticals. Presented at the 2006 AWWA Annual Conference in San Antonio, TX. June 11-15, 2006.

Pleus, R.C., Bruce, G.M., Snyder, E.M., Snyder, S.A., Corey, L.M. Incidence and Toxicological Significance of Selected Pharmaceuticals in Drinking Water. Presented at the Groundwater Resources Association's Emerging Contaminants in Groundwater Symposium, Concord, CA. June 7-8, 2006.

Corey L.M., Baker C., Luchtel D.L. Heart Rate Variability in the ApoE-/- Mouse Following Inhalational Exposure to Diesel Exhaust. American Thoracic Society (San Diego, CA). Proceedings of the American Thoracic Society, 2006.

Corey L.M., Bruce G.M., Pleus R.C. Development of Nano-Based Risk Assessments: Challenges for the Present and Future. Mechanisms of Action of Inhaled Fibers, Particles and Nanoparticles in Lung and Cardiovascular Disease (Research Triangle Park, NC). October 25-28, 2005.

Corey L.M., Baker C., Luchtel D.L. Genomic Response of the ApoE -/- Mouse to Seattle PM. American Thoracic Society (San Diego, CA). Proceedings of the American Thoracic Society 2:A296, 2005.

Luchtel D.L., Corey L.M., Baker C. Heart Rate Variability in the ApoE-/- Mouse Following Exposure to Diesel Exhaust. American Thoracic Society (San Diego, CA). Proceedings of the American Thoracic Society 2:A166, 2005.

Luchtel D.L., Corey L.M., Baker C. Serum Cytokine Levels in the ApoE-/- Mouse Following Exposure to Seattle PM. American Thoracic Society (San Diego, CA). Proceedings of the American Thoracic Society 2:A166, 2005.

Project Experience

Litigation Support

Provided expert testimony on metabolism and intoxication of ethanol and other drugs of abuse.

Evaluated potential methamphetamine and alcohol use in vehicular accidents.

Provided expert testimony on health concerns related to odors and combustion by products.

Evaluated classes of pharmaceuticals, as well as specific pharmaceuticals, in support of medical malpractice litigation.

Provided expert testimony on health concerns related to dermal and inhalation exposure to uniform fabrics.

Risk Assessment

Worked collaboratively with other scientists to conduct human health hazard assessments of select per- and polyfluoroalkyl substances (PFAS; both long- and short-chain) as part of an alternatives assessment.

Conducted toxicological assessments of human exposure to the combustion of jet engine oil and hydraulic fluid in commercial aircraft cabin air in support of ongoing litigation. Chemicals evaluated were a group of organophosphates that included tricresyl phosphate and tributyl phosphate.

Conducted multipathway human health risk assessments for community (adult and child) exposures to mercury emissions alone and total air toxics emissions from a proposed cement kiln using a U.S. EPA prescribed model. Exposure pathways included inhalation of particulates in air, ingestion of drinking water, soil, and locally caught fish.

Evaluated potential human health risks associated with roadside herbicide use in Washington State. Prepared a technical risk assessment document and summary fact sheets.

Evaluated potential for adverse effects with exposure to specific pharmaceuticals or classes of drugs. These exposures have been to healthy adults in addition to sensitive subpopulations such as pregnant women, the elderly, or people with predisposing conditions.

Developed appropriate strategies for managing environmental health and safety risks associated with nanomaterials, including the development of exposure and risk assessment methodologies.

Developed and conducted probabilistic risk assessment for exposure to particulate matter air pollutants.

Regulatory

Followed the scientific literature and regulatory environment on PFAS chemicals to provide scientific summaries and strategy to an aerospace company to aid in decision making.

Acted as scientist and project liaison for ongoing assessment of the human health risks of perchlorate exposure. Coordinated completion of numerous tasks related to pending regulatory action to establish a U.S. EPA maximum contaminant level (MCL) in water, as well as State of California criteria. Evaluated multipathway exposures to perchlorate that also included exposures to sensitive populations, such as pregnant women.

Prepared Labels and Safety Data Sheets (SDS) for industrial chemicals, chemical mixtures, perchlorate salts, and pesticides that are consistent with OSHA’s 2012 Hazard Communication Standard and Global Harmonization System. Assessed potential health effects of chemicals for submission under the European Union Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) program.