Thomas A. Lewandowski, Ph.D., DABT, ERT, ATS

Principal

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Dr. Lewandowski is a toxicologist and chemist working in Gradient's Seattle, Washington office. He has over 30 years of experience in the areas of product safety evaluation, pharmacokinetics, metals toxicology, and developmental toxicology. He is board certified as a toxicologist in both the US and Europe. He is an affiliate faculty member at the University of Washington School of Public Health where he lectures on toxicology and risk assessment. He is the author of numerous publications related to risk assessment methods (in particular the use of computer models). He is a member of the OARS WEEL committee, which reviews toxicology data to develop workplace exposure guidelines for new chemical agents.

Representative Projects

Worker and Consumer Risk Assessment: Evaluated potential health risks for production workers and consumers related to a plasticizer found in decorative films used during product assembly. Reviewed employee activity patterns related to installing the part, chemical-specific properties related to exposure and reproductive toxicity study data in animals for the chemical of interest and structural analogs.

Leather Product Alternatives Assessment: Evaluated potential alternatives to an antimicrobial chemical used in the production of leather that has significant skin sensitization potential. Conducted a literature review to identify feasible alternatives from the context of chemical hazard, availability, cost and performance.

Latex Residue Assessment: Identified an appropriate analytical testing strategy to confirm the presence of allergenic latex residue on a consumer product and assessed the risk of potential skin sensitization associated with expected consumer-level exposures. The evaluation helped the manufacturing company reach a decision about product safety.

Evaluation of Automotive Refrigerants: Conducted a risk assessment of two alternative chemicals proposed for use in vehicle air conditioning systems. Fault tree analysis (FTA) was used to estimate risks for vehicle occupants and repair personnel in the context of several different vehicle failure events (*e.g.*, collisions and fires).

Alternatives Evaluation of Two Dielectric Fluids: Evaluated the relative risks posed by the use of acetonitrile or propylene glycol as a dielectric fluid in an electrical component of a consumer product. Considered exposures of consumers, assembly workers, and repair personnel in the event of product failure or damage.

Evaluation of Cancer Risk from Radioisotope Exposure: Evaluated the exposure histories and cancer claims of plaintiffs in a lawsuit alleging exposure to americium-241 and cesium-137 from a spill at a manufacturing facility.

Assessed Potential for EMF Radiation to Cause Breast Cancer: Reviewed the scientific literature concerning the health effects of EMF radiation. Assessed potential exposures to EMF radiation for individuals in close proximity to the client's product and compared this to exposures reported in the relevant scientific studies.

Areas of Expertise

- Product Safety
- Alternative Assessment
- Risk Assessment
- Developmental Toxicology
- Pharmacokinetic Modeling
- Metals Toxicology

Education

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

M.P.H., Environmental Chemistry, University of Michigan

B.S., Biology, University of Michigan

Diplomate of the American Board of Toxicology

Registered Toxicologist in Europe and the United Kingdom (ERT)

Fellow, Academy of Toxicological Sciences (ATS)

Selected Publications

Cohen, JM; Rice, JW; **Lewandowski TA.** 2017. "Expanding the Toolbox: Hazard-Screening Methods and Tools for Identifying Safer Chemicals in Green Product Design." *ACS Sustainable Chem. Eng.* 6(2):1941-1950.

Cohen, JM; **Lewandowski, TA**. 2017. "Skin in the game: Potential skin hazards from consumer products." ABA Products Liability Litigation Newsletter Winter (28):1.

Lewandowski, T; Dodge, D. 2016. "Windows of susceptibility: Do OELs really protect workers from reproductive and developmental effects?" *Synergist* (Akron) June-July. 27 (6).

Lewandowski, TA. 2014. "Green Chemistry." In *Encyclopedia of Toxicology*, Third Edition. (Ed.: Wexler, P), Elsevier, p798-799.

Lewandowski, TA. 2015. "Developmental toxicology." Chapter 111 in *Hamilton and Hardy's Industrial Toxicology*, Sixth Edition. (Ed.: Harbison, RD et al.), John Wiley and Sons, Hoboken, NJ, p1229-1240.

Rhomberg, LR; Goodman, JE; **Lewandowski, TA**. 2010. "Chapter 1.20: Risk Assessment." In *Comprehensive Toxicology* (Second Edition). Volume 1: General Principles. Elsevier Ltd., United Kingdom, p447-464.