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## Robyn L. Prueitt, Ph.D., DABT

### Principal

Dr. Prueitt is an expert in toxicology, carcinogenesis, human genetics, and human health risk assessment. At Gradient, her primary responsibilities include evaluating toxicology and epidemiology data for regulatory comment, human health risk assessment, and other projects. Before joining Gradient, Dr. Prueitt worked as a research scientist at the Fred Hutchinson Cancer Research Center, where she designed and interpreted multi-species proteomic studies related to tumor biology and biomarker discovery. As a postdoctoral fellow at the National Cancer Institute's Laboratory of Human Carcinogenesis, Dr. Prueitt performed genomic and molecular epidemiologic studies of human cancer risk and progression. As a predoctoral student, she investigated genetic causes of human diseases using various molecular genetic techniques. Dr. Prueitt has authored many peer-reviewed articles in the fields of toxicology, genetics, and carcinogenesis.

### Areas of Expertise

- Toxicology
- Carcinogenesis
- Risk Assessment
- Human Genetics
- General & Molecular Biology
- Molecular Epidemiology

### Services

- Toxicology & Risk Sciences
- Exposure & Risk Assessment
- Air Quality Sciences
- Product Safety Assessment
- Product Liability

### Education

- Ph.D., Cell and Molecular Biology/Human Genetics, University of Texas Southwestern Medical Center at Dallas
- B.S., Biology, Pacific Lutheran University
- Diplomate, American Board of Toxicology

### Selected Projects

**Toxicology Assessment:** Evaluated the toxicological significance and human health risks of exposure to PFAS in drinking water and ambient air. Reviewed the literature regarding animal toxicology and human health effects, as well as the historical state of knowledge of these topics.

**Health Risk Evaluation:** Evaluated the potential for cancer and noncancer health effects from exposures to ethylene oxide in ambient air.

**Carcinogenicity Assessment:** Evaluated whether the weight of epidemiology, animal toxicity, mechanistic, and pharmacokinetic evidence indicates that toluene diisocyanate is a human carcinogen. This analysis used Gradient's hypothesis-based weight-of-evidence approach and was published in a peer-reviewed journal.

**Review of Toxicogenomics:** Critically reviewed global gene expression profiling data for a population exposed to benzene and determined whether the expression profile could be used as a biomarker of benzene toxicity in a broader population, particularly without proof of benzene exposure from a specific source.

**Risk Evaluation:** Evaluated the potential lung cancer risk from exposure to asbestos during vehicle brake repair and considered the association between cigarette smoking and lung cancer in comparison to that expected from asbestos exposure.

**Weight-of-Evidence Analysis:** Used Gradient's hypothesis-based weight-of-evidence approach to assess whether the epidemiology, toxicology, and mechanistic evidence support chlorpyrifos being a neurobehavioral toxicant in humans at relatively low exposure levels. This work was published in a peer-reviewed journal.

**Regulatory Comment:** Provided written and oral comments on several occasions to US EPA on clinical and epidemiology studies and their bearing on US EPA's NAAQS for ozone.

### Selected Publications

**Prueitt, RL;** Meakin, CJ; Drury, NL; Goodman, JE. 2024. "Evaluation of neural reflex activation as a potential mode of action for respiratory and cardiovascular effects of fine particulate matter." *Inhal. Toxicol.* 36(3):125-144.

**Prueitt, RL;** Hixon, ML; Fan, T; Olgun, NS; Piatos, P; Goodman, JE. 2023. "Systematic review of the potential carcinogenicity of bisphenol A in humans." *Regul. Toxicol. Pharmacol.* 142:105414.

**Prueitt, RL;** Beck, BD; Calabrese, EJ. 2023. "Use of toxicology in the regulatory process." In *Hayes' Principles and Methods of Toxicology (Seventh Edition)*. (Eds.: Hayes, AW; Kobets, T), CRC Press, Boca Raton, FL. p41-93.

Campbell, J; Clewell, H; Cox, T; Dourson, M; Ethridge, S; Forsberg, N; Gadagbui, B; Hamade, A; Naidu, R; Pechacek, N; Peixe, TS; **Prueitt, R;** Rachamalla, M; Rhomberg, L; Smith, J; Verma, N. 2022. "The conundrum of the PFOA human half-life, an international collaboration." *Regul. Toxicol. Pharmacol.* 132:105185.