Lindsey Covell, M.P.H.

SCIENTIST III

CONTACT INFORMATION

ToxStrategies, A BlueRidge Life Sciences Company
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PROFESSIONAL PROFILE

Ms. Covell is an environmental toxicologist with a master's degree and recent experience studying ecological and human health and safety in both the academic and consulting arenas. She has developed functional, computational workflows based on the principles of toxicology, exposure science, behavioral science, and risk assessment, with a goal of evaluating human exposure in various settings. She managed and provided litigation support to testifying expert witnesses on cases of asbestos exposure from automotive friction products, insulation, gaskets and packing, joint compound, stucco, and talc.

As a research associate at Columbia University, Ms. Covell performed statistical analyses on data from more than 300 participants, cleaning and analyzing the cohort data set and completing regression and stratification analysis, along with detailed code review, for publication in the scientific literature. Also at Columbia, she directed and advised a team of thirteen teaching assistants and five professors to design and present the course, "CORE Determinants of Health."

Ms. Covell's skill set includes the use of RStudio, QGIS, and ToxPi, as well as statistical modeling, data visualization, spatial mapping, computational toxicology, research methods, and descriptive toxicology.

EDUCATION AND DEGREES EARNED

2023 M.P.H., Toxicology and Environmental Health Sciences, Columbia University, New York, NY

2019 B.S., Biochemistry; minor in Political Science, Arizona State University (*Summa Cum Laude*)

HONORS/AWARDS

2015–2019 New American University Scholar

PROFESSIONAL ASSOCIATIONS

2023–present Society of Toxicology (member)

SELECTED PROFESSIONAL EXPERIENCE

Data Analysis and Statistics

Led product characterization, stability testing, and comparator product analyses of harmful and potentially harmful constituents (HPHCs) in nicotine products through the development of novel code and management of analysis workflow.

Analyzed chemical concentration data from lab reports generated from soil samples that were collected at brownfield sites across New York City. Compiled all chemical concentration data into a functional data framework for use by the New York City Department of Health and Mental Hygiene. Used spatial mapping programs to identify geographic locations with high levels of chemical contamination.

Used high-throughput hazard data resources (ToxCast, Tox21) to evaluate classes of chemicals related to various toxicological endpoints. Incorporated curated data sets into ToxPi software and implemented systematic ranking metrics to develop informative visual products.

Consumer Products

Performed comprehensive toxicological reviews of ingredients and HPHCs of oral nicotine products in preparing premarket tobacco application (PMTA) submissions to the U.S. Food and Drug Administration (FDA).

Executed multi-disciplinary evaluation of oral nicotine pouch products in developing PMTA submissions, including product physicochemistry and toxicology, toxicology studies, and human health risk assessments.

Contributed to the screening of animal toxicity studies after oral exposure to titanium dioxide and evaluated the results against a designed adverse outcome pathway to perform a comparison of daily human dietary titanium dioxide intake.

Litigation Support

Managed and provided litigation support to testifying expert witnesses in asbestos cases related to automotive friction products, insulation, gaskets and packing, joint compound, stucco, and talc. Performed comprehensive review of relevant asbestos literature and interpreted case-specific materials for use in preparing expert reports and testimony.

MANUSCRIPTS

Madl AK, Donnell MT, **Covell LT**. 2024. Synthetic vitreous fibers (SVFs): Adverse outcome pathways (AOPs) and considerations for next generation new approach methods (NAMs). Crit Rev Toxicol 54(10):754-804; doi: 10.1080/10408444.2024.2390020.

Reddam A, Bloomquist TR, **Covell LT**, Heng H, Oberfield SE, Gallagher D, et al. 2024. Negative associations of cord blood mitochondrial DNA copy number with childhood adiposity. Obesity 32(5):989–998; doi: 10.1002/oby.24005.

PRESENTATIONS

Keeton KA, Blanchette A, Benson SM, **Covell LT**, Madl AK. Analysis and comparison of nicotine pharmacokinetics of modern oral nicotine pouches. Poster Presentation 48, 77th Tobacco Science Research Conference, Atlanta, GA, September 2024.

Covell LT, Donnell MT, Keeton KA, Madl AK. Human health risk assessment of per- and polyfluoroalkyl substances (PFAS) in facial cosmetics. Abstract 5240, poster presentation P342, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024. In: The Toxicologist 198(Late-Breaking S1):233–234.

Keeton KA, **Covell L**, Donnell MT, Madl AK. Comparison of in vitro nicotine dissolution profiles across a range of oral nicotine products. Abstract 4121, poster presentation P655, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024. In: The Toxicologist 198(S1):441–442.

Donnell MT, Keeton KA, **Covell L**, Madl AK. Oral exposure to titanium dioxide (TiO2): Comparison of adverse outcome pathway (AOP) key event (KE) effect levels to human daily dietary exposures. Abstract 3087, poster presentation P190, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024. In: The Toxicologist 198(S1):130.

Williams Z, **Covell L**, Tung P, Bloomquist TR, Schilling K, Deyssenroth M, et al. Investigating the influence of prenatal metals exposures on childhood mitochondrial biomarkers. Abstract 3389, poster presentation P532, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024. In: The Toxicologist 198(S1):223.

Madl AK, Donnell MT, **Covell L** Synthetic vitreous fibers (SVFs): Adverse outcome pathways (AOPs) and considerations for new generation new approach methods (NAMs). Abstract 4288, poster presentation P863, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024. In: The Toxicologist 198(S1):492.