

Nyree T. Bekarian, M.P.H.
Senior Scientist

Professional Profile

Ms. Nyree Bekarian is a Senior Scientist in Exponent's Health Sciences Center for Exposure Assessment and Dose Reconstruction. She has over 5 years experience conducting exposure assessments and human health risk assessments for site assessments and consumer product safety evaluations.

Ms. Bekarian specializes in evaluating consumer product safety for California Proposition 65 and Consumer Product Safety Commission claims. She has experience conducting multi-pathway exposure evaluations for toys, electronics, health and beauty products, clothing accessories, and baby products. Ms. Bekarian's experience in consumer product evaluations includes developing and implementing product-use testing scenarios, designing laboratory protocols for product testing, conducting screening level evaluations, and project management. She has also developed maximum dose limits (e.g., MADLs and NSRLs) for regulated chemicals with no published dose limits.

Ms. Bekarian also has experience conducting multi-pathway risk assessments for redevelopment properties, air toxics evaluations, and pesticide safety assessments. This experience includes data management for site sampling data, performing hazard evaluations, conducting risk calculations, and calculating risk-based target cleanup concentrations for contaminated sites.

Academic Credentials and Professional Honors

M.P.H., Environmental Health Sciences, University of California, Berkeley, 2005
B.S., Biology, Tufts University, 1997

Languages

Proficient in Spanish and Armenian

Publications

Bekarian N, Payne-Sturges D, Edmondson S, Chism B, Woodruff TJ. Use of point-of-sale data to track usage patterns of residential pesticides: methodology development. *Environ Health* 2006 May; 5:15.

Walker LSK, Ausubel LJ, Chodos A, Bekarian N, Abbas AK. CTLA-4 Differentially regulates T cell responses to endogenous tissue protein vs. exogenous immunogen. *J Immunol* 2002 Dec; 16(11).

Ausubel LJ, Chodos A, Bekarian N, Abbas AK, Walker LSK. Functional tolerance is maintained despite proliferation of CD4 T cells after encounter with tissue-derived antigen. *Develop Immuno* 2002 Sep; 9(3).

Prior Experience

Senior Associate, ENVIRON International Corp., 2005–2010

Graduate Intern, United States Environmental Protection Agency Region, 2004–2005

Graduate Student Researcher, Center for Children's Environmental Health, University of California, Berkeley, 2004

Research Associate, Genzyme Corporation, 2002–2003

Project Experience

Consumer Product Safety Evaluations

Managed and conducted an evaluation of consumer exposures to phthalates and bisphenol A (BPA) in headphone cords under Proposition 65. Evaluated cords for chemical exposures via direct handling, mouthing, and hand-to-mouth exposures. Developed and conducted product use simulations using human volunteers. Developed MADLs for BPA and several phthalates.

Evaluated baby care products for potential exposure to phthalates under Proposition 65. Performed initial screening evaluation to determine which products would meet Proposition 65 requirements and which would require further evaluation. Conducted direct, product wipe-sampling, as well as product use simulations with human volunteers on products that did not pass initial screen. Routes of exposure evaluated included dermal uptake, ingestion via mouthing (for select products), and ingestion via hand-to-mouth transfer.

Conducted a Proposition 65 evaluation on DVD cases to assess consumer exposures to lead. Designed testing protocol for bulk lead testing of two different case materials. Designed and conducted product use simulations with human volunteers. Exposure routes included dermal uptake and ingestion via hand-to-mouth transfer.

Performed a Proposition 65 evaluation on exposures to lead in lipstick, eye make-up, and blush. Estimated exposures were based on measured lead content of product as well as market basket

data on frequency and amount of make-up application. Exposure routes included dermal uptake and direct ingestion (for lipstick).

Performed a Proposition 65 evaluation on lead solder used on copper garden and home goods. Exposure estimates were calculated using direct wipe sampling of solder on product seams for transfer of lead. Exposure routes included dermal uptake and ingestion via hand-to-mouth transfer.

Performed an air quality assessment under Proposition 65 to evaluate exposures to naturally occurring asbestos (NOA) in a community adjacent to a construction site. NOA was assumed to be released during grading activities at the site. Compared monitoring data for NOA to city and state trigger levels for asbestos reporting and cessation of construction activities and calculated inhalation exposures for Proposition 65 evaluation.

Site Risk Assessment

Performed a multi-pathway risk assessment under California Environmental Quality Act (CEQA) to evaluate project alternatives in a program to eradicate an invasive species of moth. Evaluated several chemicals proposed for widespread application. Identified receptors and exposure pathways for each chemical of concern (COC), conducted toxicity assessments, and calculated cancer risk and hazard quotients.

Conducted a site-wide risk assessment for closure of a RCRA permitted facility. Performed a multi-pathway risk assessment and calculated risk-based target concentrations (RBTCs) as needed for chemicals to residential clean-up levels.

Updated risk-based target concentrations (RBTCs) to be compared to new sampling data for the site of a former service station in Puerto Rico contaminated with non-aqueous phase liquid (NAPL). Translated several documents from Spanish to English, organized new data and other relevant information in preparation for expert report and deposition. Developed risk tables and calculations for calculating cancer risk and hazard indices.

Risk Communication

Helped prepare a risk communication document designed to explain risks associated with living adjacent to railroad facilities to the public. Conducted research on how to appropriately construct an effective risk communication, drafted risk communication memo targeted at lawyers, members of the community, and other lay individuals.

Professional Affiliations

Genetic and Environmental Toxicology Association of Northern California, 2005–present