

Susan Hunter Youngren, Ph.D.
Senior Managing Scientist

Professional Profile

Dr. Susan Hunter Youngren is a Senior Managing Scientist in Exponent's Food and Chemicals practice and is based in Washington, D.C. She has over 15 years in the area of risk assessment, with particular emphasis on exposure assessment. Dr. Youngren has experience with many types of risk assessments, including residential, dietary, microbial, occupational, and hazardous waste sites. She has also managed and conducted numerous non-dietary (or residential) exposure assessments for clients mandated by the EPA Food Quality Protection Act and California's Proposition 65. She has assessed dermal, inhalation, and oral exposures for products such as termiticides, flea and tick products for pets, carpets and turf, fungicides for turf and home gardens, indoor and outdoor foggers, paints, and other indoor use chemicals. Additionally, she has assessed occupational exposures to similar types of products as well as mixer/loader/applicator exposure assessments. This work includes: assessments of EPA algorithms; development of project-specific algorithms; data analysis; determination of the applicability of surrogate data; development of distributional data; and complex distributional analyses.

Prior to joining Novigen, Dr. Youngren was a Senior Project Manager with EA Engineering, Science, and Technology, Inc. Dr. Youngren was responsible for all exposure assessments in the Health Sciences Group and provided senior support for all human health risk assessments performed at EA. She managed and conducted multiple site risk assessments. Dr. Youngren provided risk assessment, risk management, and risk communication support to lead-based paint surveys and is a trained lead-based paint supervisor and inspector. Dr. Youngren was a lead participant in the conception of the National TPH Criteria Working Group and is an active member of the Executive Committee, including being a primary author of documents evaluating toxicity and fate and transport of petroleum constituents.

Credentials and Professional Honors

Ph.D., Environmental Biology and Public Policy, George Mason University, 1996
M.S., Environmental Sciences and Engineering, Virginia Polytechnic Institute and State University, 1986
B.S., Microbiology and Public Health, Michigan State University, 1977

Relevant Experience

Lead author of a technical report presenting an alternative risk-based method for evaluating risk at petroleum-contaminated sites approach. Approach was accepted by the state of Alaska.

Conducted multiple individual, aggregate, and cumulative residential/consumer product exposure assessments using deterministic and Monte Carlo techniques, as well as, proprietary software such as Calendex™. These analyses were executed to support pesticide registration, reregistration, and product stewardship activities.

Conducted drinking water exposure assessments for copper and various pesticides using proprietary software (Calendex™).

Support Calendex™ development activities including QA/QC of new versions, writing the users' manual, providing enhancements/improvements, and conducting training/user sessions. The licensees of Calendex™ include several governmental agencies (US EPA, PMRA, CDPR, USDA) and pesticide companies.

Prepared comments on draft US EPA exposure and risk assessments for residential, dietary, and occupational uses of pesticides undergoing reregistration review.

Developed potential exposure assessments of consumers to carcinogens and reproductive toxicants in consumer products, such as cosmetics, paints and pigments, food, swimming pool products, etc., to determine risk under California's Proposition 65.

Assessed occupational and consumer exposure to glycol ethers.

Assessed lead-contaminated sites using the US EPA IEUBK model and the O'Flaherty model

Prepared comprehensive analyses of ATSDR health assessments.

Conducted several occupational assessments using deterministic and Monte Carlo techniques.

Directed projects to assess risk of exposure to lead in soil, drinking water, water coolers, wine, paint, and other consumer products.

Prepared submissions to FDA for a proposed rule limiting leaching of lead in ceramicware and lead in crystal.

Publications

Petersen BJ, Youngren SH, Walls CL. Modeling dietary exposure with special sections on modeling aggregate and cumulative exposure. Handbook of Pesticide Toxicology. 2nd Edition. San Francisco, CA, Academic Press 2001.

Youngren SH, Youngren MA, Barraj L. Challenges of probabilistic assessment of operator and residential non-dietary exposure. *Am Occup Hyg* 2000; 45(1001):S49–S54.

Youngren SH, Tardiff RG. Reducing Uncertainties in Risk Assessment-Exposure Assessment. In: *Risk Analysis—Prospect and Opportunities*. Constantine Zervos (ed.). New York: Plenum Press, 1991.

Youngren SH, Rachman N, Turnbull D. Risk Assessment for children playing on lawns treated with a pesticide. In: *Risk Analysis: Prospects and Opportunities*. Zervos (ed.). New York, NY: Plenum Publishing Corporation, 1989.

Tardiff RG, Youngren SH. Public health significance of organic substances in drinking water. In: *Organic Carcinogens in Drinking Water*. N.M. Ram, E.J. Calabrese, and R.F. Christman (eds.). New York: John Wiley and Sons, Inc. 1986.

Presentations

Walls CL, Youngren SH. A calendar approach to assess aggregate exposure. Poster presented at the International Society of Exposure Analysis, Monterey, CA, October 2000.

Youngren SH, Polakoff BM. Children's exposure to pet products: how do we regulate? Presentation at the Society for Risk Analysis Annual Meeting, Atlanta, GA. December 5–8, 1999.

Youngren SH, Youngren MA. Choosing distributional forms for use in Monte Carlo exposure assessments. Presentation at the Society for Risk Analysis Annual Meeting, Phoenix, AZ, December 6–8, 1998.

Youngren SH, Walls C, Barraj L, Polakoff BM. Using a calendar method to assess exposure to pesticides applied in the home at different times. Presentation at the Society for Risk Analysis Annual Meeting, Phoenix, AZ, December 6–8, 1998.

Youngren SH, Polakoff BM, Walls CL. Impact of different methods of assessing exposure to pesticides used in the residential environment. Poster presented at the International Society of Exposure Analysis, Boston, MA, August 16–18, 1998.

Youngren SH, Polakoff BM, Walls CL. Advancing non-dietary exposure assessment in the residential environment: The impact of the FQPA. Poster presented at the International Union of Pure and Applied Chemistry, London, UK, August 2–7, 1998.

Youngren SH, Tomerlin JR, Petersen BJ, Barraj LM. Advancing exposure assessment in the residential environment: Aggregate exposure assessment. Poster presented at the International Union of Pure and Applied Chemistry, London, UK, August 2–7, 1998.

Youngren SH, Youngren MA. Modeling exposure with minimal data: an exploration into Monte Carlo and Bayesian analysis. Presented at the Society for Risk Analysis Annual Meeting, Washington, DC, December 1997.

Erdal S, Youngren SH. Application of a tiered human health risk analysis approach to TPH-contaminated arctic sites. Society for Risk Analysis Annual Conference, New Orleans, LA, December 8–12, 1996.

Youngren SH, Youngren MA. Implications of quantitative assessment in the analysis of children's exposure to lead in ceramicware. Society for Risk Analysis Annual Conference, Honolulu, HI, December 3–6, 1995.

Youngren SH, Weisman W, Edwards D, MacDonald R, Wilkenfeld R, Albertson B. Proposed method for determining cleanup levels at petroleum contaminated sites without the use of TPH. Society for Risk Analysis Annual Conference, Honolulu, HI, December 3–6, 1995.

Youngren SH. Uncertainty analysis of exposure to petroleum contaminated soils. Invited presentation at INFORMS, New Orleans, LA, October 29–31, 1995.

Weisman W, Youngren S. TPH criteria working group initiatives and project summaries. Hydrocarbon Contaminated Soils: Expediting Cleanups in USEPA/Region 6. New Orleans, LA, January 11–13, 1995.

JS LaKind, Youngren SH, Naiman DQ. Comparison of four models for predicting blood lead levels in children. Society for Risk Analysis Annual Conference, Baltimore, MD, December 4–7, 1994.

Kostecki PT, Weisman W, Youngren S. Soil and groundwater risk assessment issues. Hazardous Materials International Conference, Philadelphia, PA, June 1994.

Kostecki PT, Weisman W, Youngren S. New approaches in the development of soil cleanup criteria: Revisiting TPH. Health Risk Characterization and Soil Cleanup Criteria Seminar, Groundwater Association. Connecticut, May 1994.

Youngren SH, Weisman W, McKenna EJ, Piccin TB, Schroeder JR, Baker SR. Substitutions for total petroleum hydrocarbons at fuel-contaminated sites. Presented at Society for Risk Analysis Annual Meeting, Savannah, Georgia, December 5–8, 1993.

Graves CG, Youngren SH, Piccin TB. Use of Monte Carlo Analysis for a multi-media, multi-chemical exposure assessment. Presented at Society for Risk Analysis Annual Meeting, Savannah, Georgia, December 5–8, 1993.

Rachman NJ, Youngren SH. Critical evaluation of current approaches to assessing dietary exposures to pesticides. Presented at American Chemical Society Meeting, Washington, DC, August 26, 1992.

Rodricks JV, Youngren SH. Use of exposure assessment in risk assessment. Proceeding of CTFA/SDA Meeting on Exposure Assessment, Washington, DC, 1992.

Rachman NJ, Youngren SH. Dietary exposure estimation and risk assessment of pesticides. Presented at NACA Fall Conference: Agricultural Chemicals: From the Outside Looking In! Washington, DC, October 31, 1991.

Scofield R, Powell R, Conklin M, Machado R, Youngren SH, Fechner E, Gough M, Tardiff R. Multipathway risk assessment methodology compatible with California decision tree and EPA Superfund guidelines. Proceedings of the 1988 Hazardous Wastes and Hazardous Materials Conference, Las Vegas, Nevada, April 1988.

Schlesinger JS, Machado RJ, Youngren SH, Baynes C, Sternberg YM. Application of an air model in a risk assessment. Proceedings of the 1987 Specialty Conference: Environmental Engineering, American Society of Civil Engineers, 1987.

Professional Affiliations

- American Association of University Women
- International Society of Exposure Analysis (Councilor)
- Society for Occupational and Environmental Health
- Society of Risk Analysis (National and National Capitol Area Chapter)