

Exponent®
Engineering & Scientific Consulting

Rick Reiss, Sc.D.

Group Vice President and Principal Scientist | Chemical Regulation and Food Safety
Alexandria
+1-571-227-7228 | rreiss@exponent.com

Professional Profile

Rick Reiss, Sc.D., is a group vice president and principal scientist at Exponent specializing in human health risk assessment, pesticide regulatory consulting, and chemical exposure analysis. With over 30 years of experience, he helps chemical manufacturers, pesticide registrants, food companies, and legal teams navigate complex regulatory challenges and litigation matters involving pesticides, industrial chemicals, and consumer product ingredients.

Dr. Reiss has conducted human health risk assessments, advanced data analyses, probabilistic exposure modeling, and environmental fate and transport modeling for a wide range of environmental agents, including pesticides, industrial chemicals, and chemicals used in consumer products. He is actively engaged in the development and application of quantitative methods in risk assessment.

Dr. Reiss is a past president and current fellow of the Society for Risk Analysis (SRA), the leading international scientific organization dedicated to the advancement of risk analysis. He has published broadly in the peer-reviewed literature in the areas of human and ecological risk assessment, exposure assessment, dose-response analysis, and epidemiology, and he served as managing editor of Risk Analysis: An International Journal, the field's premier scholarly journal, from 2001 through mid-2008. He received the 2001 Chauncey Starr Award (early career) and the 2018 Outstanding Practitioner Award from SRA.

Chemical Exposure and Health Risk Assessment

Dr. Reiss is an environmental health scientist with extensive expertise in human health risk assessment, exposure assessment, toxicology, environmental chemistry and fate, mathematical modeling, and applied statistics. He provides scientific consulting on complex issues arising under numerous environmental statutes (FIFRA, TSCA, Clean Air Act) and has deep experience in both chemical risk assessment and air quality analysis.

Physiologically Based Pharmacokinetic Modeling

Dr. Reiss leads the development of physiologically based pharmacokinetic (PBPK) models and has contributed to the development of New Approach Methodologies (NAMs) to evaluate species differences in chemical toxicity and mode of action (MOA) analysis. He also has substantial expertise in dose-response modeling and extensive experience with multiple dose-response software platforms.

© 2026 Exponent, Inc. All Rights Reserved

PFAS Risk Assessment and Supply Chain Analysis

Dr. Reiss leads projects to evaluate the risk of products that contain PFAS, including exposure and toxicological analysis. Dr. Reiss performs exposure and risk assessments for products that contain PFAS, including estimation of exposure from novel pathways and consideration of differential toxicity of PFAS chemicals. He also leads projects that determine the source of PFAS in products from supply chain analysis, including designing testing programs.

Pesticide Volatilization and Drift

A particular area of specialization for Dr. Reiss is the evaluation of health risks associated with pesticide volatilization and spray drift. He is the developer of the Probabilistic Exposure and Risk Assessment Model for FUMigants (PERFUM), an air dispersion model designed to evaluate bystander inhalation exposure following fumigant applications. PERFUM is widely used by the U.S. Environmental Protection Agency and other public agencies to assess bystander risks from pesticide volatilization. Dr. Reiss also performs risk assessments for pesticide spray drift, including serving as an expert witness for cases involving alleged exposures from spray drift.

Dose-Response Modeling

Dr. Reiss has performed dose-response modeling for numerous chemical species, including the use of U.S. EPA BMDS and European Union PROAST software. He has applied benchmark dose (BMD) analysis to refine the point-of-departure in regulatory risk assessments.

Academic Credentials & Professional Honors

Sc.D., Environmental Health, Harvard University, 1994

M.S., Environmental Engineering, Northwestern University, 1991

B.S., Chemical Engineering, University of California, Santa Barbara, 1989

Outstanding Practitioner Award from the Society for Risk Analysis, 2018, recognizing a scientist with an outstanding risk assessment practice.

Chauncey Starr Award from the Society for Risk Analysis, 2001, recognizing a scientist under 40 years of age who has made significant contributions to risk analysis

Outstanding Service Award, Society for Risk Analysis, 2009

Leslie Silverman Scholarship, Harvard University, 1991

Walter P. Murphy University Fellowship, Northwestern University, 1989-1990

Prior Experience

Vice President, Sciences International, 2000-2006

Senior Scientist, Quantitative Risk Assessment Expert, Jellinek, Schwartz & Connolly, Inc., 1998-2000

Senior Air Quality Analyst, Sonoma Technology, Inc., 1994-1998

Engineer, Environmental Solutions, Inc., 1990-1991

Professional Affiliations

Society of Toxicology (Full member)

Society for Risk Analysis (Fellow)

Publications

Badding, M., Gollapudi, B. B., Reiss, R., Harkema, J. R., & Cohen, S. M. (2026). Mode of action (MOA) for nasal tumors induced by methyl isothiocyanate (MITC) in Sprague Dawley rats. Journal of toxicology and environmental health. Part B, Critical reviews, 1–25. https://doi.org/10.1080/10937404.2026.2640072

Nallani, G., Chandrasekaran, A., Kassahun, K., Shen, L., Reiss, R., & Whatling, P. (2025).In vitro metabolic clearance of malathion in rats and humans. Toxicology in vitro: an international journal published in association with BIBRA, 107, 106080. https://doi.org/10.1016/j.tiv.2025.106080.

Nallani, G., Chandrasekaran, A., Kassahun, K., Shen, L., Reiss, R., & Whatling, P. (2023).Determination of enzymatic kinetics of metabolism of dimethoate and omethoate in rats and humans. Xenobiotica; the fate of foreign compounds in biological systems, 53(4), 279–287.

Kirman, C. R., Sheehan, P. J., Li, A. A., Bus, J. S., Su, S. H., Dopart, P. J., Watson, H. N., Moynihan, E. E., & Reiss, R. (2025). Characterization of Background Exposures to Ethylene Oxide in the United States: A Reality Check on Theoretical Health Risks for Potentially Exposed Populations near Industrial Sources. International Journal of Environmental Research and Public Health, 22(4), 597.

Reiss, R., Loccisano, A., Deines, A., Kim, M., Nallani, G., Chandrasekaran, A., & Whatling, P. (2023). A physiologically-based pharmacokinetic/pharmacodynamic (PBPK/PD) model for the insecticide dimethoate. Xenobiotica; the fate of foreign compounds in biological systems, 53(5), 382–395. https://doi.org/10.1080/00498254.2023.2258507

Meek, E. C., Reiss, R., Crow, J. A., & Chambers, J. E. (2021). Inhibition Kinetics of 16 Organophosphorus Pesticides or Their Active Metabolites on Erythrocyte Acetylcholinesterase From Humans and Rats. Toxicological sciences : an official journal of the Society of Toxicology, 183(2), 404–414. https://doi.org/10.1093/toxsci/kfab031

Riter LS, Pai N, Vieira BC, MacInnes A, Reiss R, Hapeman CJ, Kruger GR.Conversations about the Future of Dicamba: The Science Behind Off-Target Movement. J Agric Food Chem. 2021 Dec 8;69(48):14435-14444. doi: 10.1021/acs.jafc.1c05589. Epub 2021 Nov 24. PMID: 34817161.

Gollapudi BB, Su S, Li AA, Johnson GE, Reiss R, Albertini RJ. Genotoxicity as a toxicologically relevant endpoint to inform risk assessment: a case study with ethylene oxide. Environ Mol Mutagen. 2020 Nov; 61(9):852-871.

Badding MA, Barraj L, Williams AL, Scrafford C, and Reiss R. CLARITY-BPA Core Study: Analysis for Non-Monotonic Dose-Responses and Biological Relevance. Food Chem Toxicol. 2019 Sept, 131;110554

DeSesso JM, Williams AL, Reiss R. Conflicting views on the potential carcinogenicity of glyphosate: How did we get here and what should we do? J Pub Health Emerg 2017; 1:78. doi: 10.21037/jphe.2017.09.03.

Aslund MW, Breton RL, Padilla L, Winchell M, Wooding KL, Moore DR, Teed RS, Reiss R, Whatling P. Ecological risk assessment for Pacific salmon exposed to dimethoate in California. Environ Toxicol Chem 2017; 36:532-543.

Reiss R, Chang ET, Richardson RJ, Goodman M. A review of epidemiologic studies of low-level exposures to organophosphorus insecticides in non-occupational populations. Crit Rev Toxicol 2015 Aug; 45(7):531-641. doi: 10.3109/10408444.2015.1043976.

Murphy M, Stettler N, Smith KM, Reiss R. Associations of consumption of fruits and vegetables during pregnancy with infant birth weight or small for gestational age (SGA) births: A systematic review of the literature. Int J Womens Health 2014; 6:899-912.

Reiss R, Johnston J, Tucker K, DeSesso JM, Keen CL. Estimation of cancer risks and benefits associated with a potential increased consumption of fruits and vegetables. Food Chem Toxicol 2012; 50:4421-4427.

Reiss R, Neal B, Lamb JC, Juberg DR. Acetylcholinesterase dose-response modeling for chlorpyrifos and chlorpyrifos-oxon. Regul Toxicol Pharm 2012; 63:124-131.

Bogen R, Reiss R. Generalized Haber's law with exponential decline, with application to riparian-aquatic pesticide ecotoxicity. Risk Anal 2012; 32:250-258.

Cantor R, Lyman M, Reiss R. Asbestos claims and litigation. The John Liner Review 2009; 23:28-38.

Reiss R, Lewis G, Griffin J. An ecological risk assessment for triclosan in the terrestrial environment. Environ Toxicol Chem 2009, 21:2483-2492.

Levy J, Reiss R. The importance of modeling in exposure and risk assessments. Environmental Manager 2008; 14-17, June.

Reiss R, Anderson EL, Cross CE, Hidy G, Hoel D, McClellan R, Moolgavkar S. Evidence of health impacts of sulfate and nitrate containing particles in ambient air. Inhalat Toxicol 2007; 19:419-449.

Reiss R. Temporal trends and weekend-weekday differences for benzene and 1,3-butadiene in Houston, Texas. Atmos Environ 2006; 40:4711-4724.

Reiss R, Griffin J. A probabilistic model for acute bystander exposure and risk assessment for soil fumigants. Atmos Environ 2006; 40:3548-3560.

Reiss R, Schoenig GP, Wright, GA. Development of factors for estimating swimmer exposures to chemicals in swimming pools. Hum Ecol Risk Assess 2006; 12:139-156.

Reiss R, Gaylor D. Use of benchmark dose and meta-analysis to determine the most sensitive endpoint for risk assessment for dimethoate. Regul Toxicol Pharmacol 2005; 43:55-56.

Reiss R, Anderson EL, Lape J. A framework and case study for exposure assessment in the Voluntary Children's Chemical Evaluation Program. Risk Anal 2003; 23:1069-1084.

Reiss R, MacKay N, Habig C, Griffin, J. An ecological risk assessment for triclosan in lotic systems following discharge from wastewater treatment plants in the U.S. Environ Toxicol Chem 2002; 21:2483-2492.

Wilkinson CF, Christoph GR, Julien E, Kelley JM, Kronenberg J, McCarthy J, Reiss R.Assessing the risks of exposures to multiple chemicals with a common mechanism of toxicity: How to cumulate? Regul Toxicol Pharmacol 2000; 31:30-43.

Allen G, Sioutas C, Koutrakis P, Reiss R, Lurmann FW, Roberts PT, Burton R.M. Evaluation of the TEOM method for measurement of ambient particulate mass in urban areas. J Air Waste Manage Assoc 1997; 47:682-689.

Reiss R, Ryan PB, Koutrakis P, Tibbetts S. Ozone reactive chemistry on interior latex paint. Environ Sci Technol 1995; 29:1906-1912.

© 2026 Exponent, Inc. All Rights Reserved

Reiss R, Ryan PB, Tibbetts S, Koutrakis P. Measurement of organic acids, aldehydes, and ketones in residential environments and their relation to ozone. J Air Waste Manage Assoc 1995; 45:811-822.

Reiss R, Ryan PB, Koutrakis P. Modeling ozone deposition onto indoor residential surfaces, Environ Sci Technol 1994; 28:504-513.

Selected Presentations and Conference Proceedings

Reiss R, Loccisano A, Schutte M, Mehta J, Kapre R. A physiologically-based pharmacokinetic (PBPK)/pharmacodynamic (PD) model for rats and humans for the insecticide acephate. Society of Toxicology. 2026. San Diego, California.

Badding M, Gollapudi B, Reiss R, Harkema J, Cohen S. A mode of action (MOA) and human relevance framework (HRF) analysis for nasal tumors induced by methyl isothiocyanate (MITC) in Sprague Dawley rats. Society of Toxicology. 2026. San Diego, California.

Reiss R, Codrea E, Jonynas A, Whatling P. Data-derived extrapolation factors for interspecies extrapolation of organophosphate pesticide pharmacodynamic factors. Society of Toxicology. 2025. Orlando, Florida. Winner of a Best Poster from the Risk Assessment Specialty Section.

Mingoia R, Reiss R, Loccisano A, Bartels M, Corvaro M, Himmelstein M, Printemps N. Triclopyr: physiologically based kinetic (PBK) model in rat, dog, and human. Society of Toxicology. 2025. Orlando, Florida.

Corvaro M, Johnson K, Himmelstein M, Bianchi E, Mingoia R, Bartels MJ, Domoradzki J, Reiss R, Williams A, Richmond E, Terry C, LaRocca J, Murphy L, Gehen S. Spinosad–mode of action and human relevance assessment of dystocia in rats. Society of Toxicology. 2024. Orlando, Florida.

Richard Reiss, John Buonagurio. SOFEA modeling to address a methyl bromide data call-in for ambient monitoring in Siskiyou County. American Chemical Society. 2024. Denver, Colorado.

Reiss R, Jonynas A, Whatling P, Codrea B, Strupp C. Estimating interspecies pharmacodynamic data-derived extrapolation factors for organophosphate pesticides Society for Risk Analysis. 2023. Washington, DC.

Domoradzki J, Reiss R, Loccisano A, Deines A, Davis B, Bartels M, Mingoia R, Himmelstein M,. Spinosad: a physiologically based pharmacokinetic (PBPK) model in the rat and human including the pregnancy life stage. Society of Toxicology Meeting. 2022. Nashville, TN.

Reiss R, Loccisano A, Whatling P, Kim M, Chandrasekaren A. Development of a Rat and Human PBPK/PD Model for Dimethoate. Society for Risk Analysis. 2021 Virtual Meeting.

Beevers C, Badding M, Barraj L, Reiss R, Williams AL. CLARITY-BPA core study: analysis for non-monotonic dose-responses. Poster presentation, 55th Congress of the European Societies of Toxicology, Helsinki, Finland, 2019

Badding MA, Barraj L, Williams AL, Reiss R. CLARITY-BPA core study: analysis for non-monotonic dose-responses. Presented at the Annual Meeting of the Society of Toxicology, Baltimore, MD. March 2019. Toxicologist (Abstract 3144).

Reiss R, Badding M, Barraj L. Assessing potential for non-monotonic dose response for BPA in the CLARITY-BPA study. Presented at Society for Risk Analysis Annual Meeting. Washington, DC. December 2019.

Buonagurio R, Cryer S, van Wesenbeeck I, Reiss R. Development of the soil fumigant exposure assessment (SOFEA) model. Presented at the Fall 2019 ACS National Meeting, San Diego, CA. August

2019.

Pai N, Sall E, Stryker J, Popovic J, Reiss R, Cubbage J. Comparison of three flux models across five field studies. Presented at Fall 2019 ACS National Meeting, San Diego, CA. August 2019.

Orr T, Pai N, Sall E, DesAutels C, Popovic J, Reiss R. Evaluating spatial scale effects of dicamba applications on off-target vapor movement. 256th ACS National Meeting. Boston, MA. August 2018.

Reiss R, Driver J, Ross J, Young B. Aggregate and cumulative exposure contribution for pyrethroids: consideration of modeling and biological monitoring. International Society of Exposure Analysis and Epidemiology. Research Triangle Park, North Carolina, September 2017.

Reiss R. Recent history of fumigant and semi-volatile bystander risk assessment and use of PERFUM. American Chemical Society. Washington, DC. August 2017.

Aslund M, Breton R, Padilla L, Reiss R, Whatling P, Winchell M, Wooding K, Moore M, Ecological risk assessment for Pacific salmon exposed to dimethoate in California. American Chemical Society, Boston, MA, August 2016.

Ma Q, Reiss R., Schocken M. Influence of EPA's newer groundwater model (PRZM-GW) on drinking water exposure assessment. American Chemical Society, Philadelphia, PA. August 2016.

Reiss R. An evaluation of epidemiologic studies of low-level exposures to organophosphorus insecticides and implications for risk assessment. Society for Risk Analysis, Arlington, VA, December 2015.

Reiss R, Tucker K, Weidling R. Validation of pesticide dietary exposure model using biomonitoring data—Case study for chlorpyrifos. Society for Risk Analysis, Denver, CO, December 2014.

Beyer D, Hays S, Hentz K, Lamb J, Reiss R, Hentges S. EFSA's WoE analysis of bisphenol A (BPA) is sound, but improved BMDL and HEDF calculations support reconfirming the 50 µg/kg-bw/day TDI. Eurotox, Edinburgh, Scotland, 2014.

Reiss R, Tucker K, Johnston J. Fruits and vegetables are good for you: Cancer risks and benefits as a case study. American Chemical Society/IUPAC Joint Meeting, San Francisco, CA, 2014.

Poletika N, Mosquin P, Aldworth J, Reiss R, Williams M. Interpretation of peak concentration estimates for a typical NAWQA/NASQAN surface water monitoring dataset using a weight-of-evidence approach. American Chemical Society/IUPAC Joint Meeting, San Francisco, CA, 2014.

Ma Q, Reiss R, Whatling P. Non-equilibrium sorption of flutriafol on predicted environmental concentrations. Presentation to the 245th American Chemical Society (ACS) National Meeting & Exposition, New Orleans, LA, April 7-11, 2013.

Reiss. R. Assessing risks from pesticide post-application volatilization. Presentation to the 246th American Chemical Society (ACS) National Meeting, Indianapolis, IN, September 8-12, 2013.

Ma Q, Reiss R, Whatling P. Influence of time-dependent sorption of flutriafol on predicted environmental concentrations. Presentation to the 246th American Chemical Society (ACS) National Meeting, Indianapolis, IN, September 8-12, 2013.

Reiss R. What can we learn and apply from journal peer review. Society for Risk Analysis, Baltimore, MD, 2013.

Reiss R. Assessing risks of pesticide post-application exposure. American Chemical Society, Indianapolis, IN, 2013.

Reiss R. Estimation of cancer risks and benefits associated with a potential increased consumption of fruits and vegetables. Invited presentation at the U.S. Department of Agriculture, Washington, DC, 2012.

Reiss R. Measuring risk exposure when using global supplier. Society for Risk Analysis World Congress, Sydney, Australia, 2012.

Reiss R, Johnston J, DeSesso J, Tucker K. Pesticide residues on food: A mountain or a molehill. Society for Risk Analysis, Charleston, SC, 2011.

Reiss R, Bogen K. Modeling risk to aquatic species subject to realistic, dynamic exposures using a generalized form of Haber's law. American Chemical Society, Denver, CO, 2011.

Ma Q, Reiss R, Habig C. Applying the joint probability distribution analysis for Pacific Northwest salmonid risk assessment. American Chemical Society, Denver, CO, 2011.

Li A, Reiss R, Lowe K, McIntosh L, Mink P. Framework for integration of human and animal data for risk assessment. Society of Toxicology, Washington, DC, 2011.

Reiss R. Atmospheric modeling of fumigants. Workshop on methyl bromide alternatives, Kansas State University, Manhattan, KS, May, 2010.

Reiss R. Health risk assessment for fumigants. Keynote address to the annual meeting of the Australia-New Zealand Chapter of the Society for Risk Analysis, Sydney, Australia, September 2010.

Reiss R. Evaluation of water contamination from consumer product uses. Invited presentation to the National Capitol Area Chapter of the Society for Toxicology, Washington, DC, April, 2010.

Reiss R. The evolution of health risk assessment in the United States. Keynote address to the first annual Society for Risk Analysis meeting of the Taiwan SRA chapter, Taichung, Taiwan, January, 2010.

Reiss R. Risk analysis: The evolution of a science. Invited presentation to the Joint IRAC-SRA-CBER-JIFSAN Symposium on New Tools, Methods and Approaches for Risk Assessment, Baltimore, MD, December, 2009.

Reiss R. Exposure analysis: Pathways to refining regulatory risk assessments. Midwest States Risk Assessment Symposium, Indianapolis, IN, November 2009.

Williams P, Reiss R. Modeling the variability in consumer product use patterns. International Society for Exposure Analysis annual meeting, Minneapolis, MN, November 2009.

Cramer S, Poletika N, Everich R, Schocken M, Habig C, Reiss R. Framework for estimating exposure to ESA-listed salmon to pesticides. American Chemical Society semiannual meeting, Washington, DC, August 2009.

Reiss R, Edwards M. Analysis of cholinesterase variability in animals and implications for risk assessment. Society for Risk Analysis Annual Meeting, Boston, MA, December 2008.

Reiss R, Lewis G, Griffin J, Inauen J, Navarro L. Terrestrial risk assessment for triclosan. Poster presentation, Pacific Northwest Organic Residuals Symposium, Davis, CA, October 2008.

Reiss R, Chan R. Estimation of emission rates for building fumigations. Methyl Bromide Alternative Outreach conference, San Diego, CA, October 2007.

Reiss R, Chan R. Impact of estimation methods and tarping methods on flux rates. Methyl Bromide Alternative Outreach conference, San Diego, CA, October 2007.

Reiss R, Anderson E, Turnham P. Exposure and risk assessment for residents and contractors associated with vermiculite attic insulation. International Society for Exposure Analysis. Durham, North Carolina, October 2007.

Reiss R. A critical evaluation of the National Ambient Air Toxics Assessment (NATA) program for benzene. Society for Risk Analysis Annual Meeting, Baltimore, MD, December 2006.

Reiss R, Inauen J, Hoffman-Kamensky M, Capdevielle M. Terrestrial risk assessment for triclosan. Society of Environmental Toxicology and Chemistry Meeting, Montreal, Canada, November 2006.

Reiss R. Near-field air quality impacts from fumigant applications. American Chemical Society Meeting, San Francisco, CA, September 2006.

Reiss R. A probabilistic model for estimating bystander inhalation risks following fumigant applications. American Chemical Society Meeting, San Francisco, CA, September 2006.

Reiss R, Gaylor D. Statistical evaluation to determine the most appropriate endpoint for dimethoate risk assessment. Society for Risk Analysis Annual Meeting, Orlando, FL, December 2005.

Reiss R. Bystander risk assessment for fumigant: an evaluation of current regulatory activity. Society for Risk Analysis Annual Meeting, Orlando, FL, December 2005.

Gibb HJ, Kozlov K, Centeno J, Kolker A, Conko K, Reiss R. Potential health risks from long term mercury exposure in Gorlovka, Ukraine. Society for Risk Analysis Annual Meeting, Orlando, FL, December 2005.

Reiss R. Development of risk-based buffer zones for a fumigant application. Society for Risk Analysis Annual Meeting, Palm Springs, CA, December 2004.

Reiss R. Estimating fumigant buffer zones by air dispersion modeling. Methyl Bromide Alternatives Outreach Conference, Orlando, FL, October 2004.

Reiss R. Air exposure following a fumigant application. International Society of Exposure Analysis Meeting, Philadelphia, PA, October 2004.

Reiss R. Analysis of benzene and 1,3-butadiene emissions in the Houston Ship Channel. Presented at API/EPA Conference on Emissions Uncertainties, Houston, TX, 2003.

Reiss R, Anderson EL. A framework and case study for the Voluntary Children's Chemical Evaluation Program. Presented at the Society for Risk Analysis Annual Meeting, New Orleans, December 2002.

Reiss R. Emerging issues in environmental health for children. Invited lecture given at the Air and Waste Management Association meeting in Baltimore, MD, June 2002.

Reiss R, Griffin, J. A critical review of the National Emissions Inventory for Air Toxics. Presented at the Coordinating Research Council conference on Air Toxics Modeling, Houston, TX, February 2002.

Reiss R, MacKay N, Habig C, Griffin J. A probabilistic ecological risk assessment for Triclosan in lotic systems following discharge from wastewater treatment systems. Presented at the Society of Environmental Toxicology and Chemistry meeting, Baltimore, MD, November 2001.

Reiss R. A review of the National Air Toxics Assessment. Presented at the Mid-Atlantic Section Meeting of the Air and Waste Management Association, Baltimore, MD, December 11, 2000.

Reiss R, Wilkinson CW. Exposure to chemicals with same mechanism of action: How to add the risk? Presented at the Annual Meeting of the American College of Toxicology, McLean, VA, November 9, 1999.

Lurmann FW, Reiss R. Analysis of the first three years of PM2.5 data collected in the Southern California Children's Health Study. Presented at PM2.5 A Fine Particle Standard, Long Beach, CA, sponsored by A&WMA, U.S. Environmental Protection Agency, and the U.S. Department of Energy, January 28-30, 1998.

Reiss R, Chinkin L. Ozone exceedance data analysis: representativeness of the 1995 summer ozone season in the Northeast. Paper presented at the 1st NARSTO Northeast Data Analysis Symposium and Workshop, Norfolk, VA, December 10-12, 1996.

Coe D, Chinkin L, Reiss R, DiSogra C, Hammerstrom K. An emission inventory of agricultural internal combustion engines for California's San Joaquin Valley. Paper presented at the Air & Waste Management Association Emission Inventory: Key to Planning, Permits, Compliance & Reporting Conference, New Orleans, LA, September 4-6, 1996.

Main HH, Roberts PT, Korc ME, Coe DS, Dye TS, Lindsey CG, Reiss R. Analysis of PAMS and NARSTO-Northeast data—Supporting evaluation and design of ozone control strategies: A workshop. Presented at U.S. Environmental Protection Agency, Research Triangle Park, NC by Sonoma Technology, Inc., Santa Rosa, CA, December 11-12, 1995.

Chinkin LR, Ryan PA, Reiss R. A critical evaluation of biogenic emission systems for photochemical grid modeling in California. Paper presented at the Air & Waste Management Association and U.S. Environmental Protection Agency Emissions Inventory Conference, Research Triangle Park, NC, October 11-13, 1995.

Main HH, Roberts PT, Lurmann FW, Wright DB, Reiss R, Hering SV. Measurement of acid gases and PM2.5 in 12 Southern California communities for use in an epidemiologic study. Paper presented at the Air & Waste Management Association and U.S. Environmental Protection Agency Conference on Measurement of Toxic and Related Air Pollutants, Research Triangle Park, NC, May 16-18, 1995.

Reiss R, Lurmann FW, Roberts PT, Schoell BM, Geyh AS, Koutrakis P. A pilot personal ozone study in Southern California for validation of a microenvironmental model. Paper presented at the Air & Waste Management Association and U.S. Environmental Protection Agency Conference on Measurement of Toxic and Related Air Pollutants, Research Triangle Park, NC, May 16-18, 1995.

Allen G, Koutrakis P, Reiss R, Lurmann F, Roberts PT, Burton R, Wilson W. Evaluation of the TEOM method for measurement of ambient particle mass in urban areas. In: Transactions of the Air & Waste Management Association Conference on Particle Matter: Health and Regulatory Issues, Pittsburgh, PA. Air & Waste Management Association, Pittsburgh, PA, April 4-6, 1995.

Reiss R, Ryan PB, Tibbetts S, Koutrakis P. Ozone reactive chemistry in residential environments. Presented at Air & Waste Management Association Conference, Measurement of Toxic and Related Air Pollutants, Durham, NC, May 1994.

Reiss R, Ryan PB, Koutrakis P, Bamford S. Modeling ozone deposition onto indoor surfaces. Presented at an Air & Waste Management Association Conference, Measurement of Toxic and Related Air Pollutants, Durham, NC, May 1993.

Book Chapters

Ma Q, Reiss R, Habig C, Whatling P. Use of the joint probability distribution analysis for assessment of the potential risks of dimethoate to aquatic endangered species. Chapter 12, pp. 171-181. In: Pesticide Regulation and the Endangered Species Act. ACS Symposium Series, Vol. 1111, American Chemical Society, 2012.

Reiss R. Use of simple stream modeling methods to assess the potential risks of malathion to salmonids. Chapter 11, pp. 159-169. In: Pesticide Regulation and the Endangered Species Act. ACS Symposium

Series, Vol. 1111, American Chemical Society, 2012.

Cantor R, Lyman M, Reiss R. Asbestos claims and litigation. In: Product Liability, 2011.

Reiss R. Ozone reactive chemistry on interior surfaces of buildings. In: Encyclopedia of Environmental Analysis and Remediation, 1998.

Project Experience

Chemical Exposure and Health Risk Assessment

- Performed over 100 risk assessments for chemical contaminants or products.
- Conducted air dispersion modeling analyses for toxic air contaminant releases at diverse industrial facilities, including refineries, chemical manufacturing plants, food processing facilities, and others.
- Developed a testing and analysis program to quantify interspecies and intraspecies differences for pharmacodynamics to estimate data-derived extrapolation factors.
- Mode-of-action analysis and testing for the reclassification of methyl isothiocyanate (MITC) to a non-threshold carcinogen.
- Led the development of a tool to use artificial intelligence to perform a review of toxicology, ecotoxicology, and epidemiology studies.

Physiologically Based Pharmacokinetic Modeling

- Developed several PBPK models for organophosphates that estimate dosimetry of parent and metabolites and also simulate acetylcholinesterase inhibition to develop points-of-departure for risk assessment.
- Developed metabolism testing programs to inform PBPK modeling and interspecies comparison.
- Developed numerous PBPK models for interspecies comparison of dosimetry to inform risk assessment.

PFAS Supply Chain Analysis

- Designed a testing program to assist a food producer in assessing transfer of PFAS from food contact surfaces.
- Designed a testing program to assist a food producer in assessing potential PFAS contamination of food products.

Pesticide Volatilization and Drift

- Performed regulatory exposure and risk assessments for most fumigant products in the market, including for pre-plant soil and post-harvest use.
- Conducted exposure and risk assessments for pesticide volatilization and drift for non-target plant damage.
- Analyzed spray drift exposure for regulatory risk assessments.

- Analyzed volatilization and spray drift exposures as an expert witness in alleged over-exposure cases.

Dose-Response Analysis

- Led the use of BMD analysis in numerous regulatory risk assessments for pesticides.
- Applied BMD modeling to ascertain the most sensitive endpoint for risk assessment for the organophosphate dimethoate.
- Performed dose-response analysis to assess the potential for non-monotonic dose-response for bisphenol A.

Editorships & Editorial Review Boards

Editorial Board, Risk Analysis: An International Journal