

Jay Turim, Ph.D.
Senior Managing Scientist

Professional Profile

Dr. Jay Turim is a Senior Managing Scientist in Exponent's Health Sciences Center for Epidemiology, Biostatistics, and Computational Biology. He has more than 35 years experience in assessing the risk to human health posed by the release of substances into the environment or the workplace. Dr. Turim has directed and participated in numerous projects for commercial and government clients modeling dose-response relationships of potentially toxic substances, assessing risks posed by industrial operations, and investigating corporate environmental liabilities. Among the large-scale projects directed by Dr. Turim has been the oversight of hundreds of risk assessments of Superfund sites, environmental audits for international clients spanning numerous sites across the world, preparation of toxicity profiles for ATSDR, EPA, and NIOSH, and regulatory support to parties dealing with governmental agencies. For the past 10 years, he has been engaged in the study of risks posed by asbestos and man-made mineral fibers as well as other regulated substances under the Clean Air Act.

Dr. Turim recently participated as an invited specialist in a workshop convened by the World Health Organization to assess the comparative health effects of asbestos substitutes.

Academic Credentials and Professional Honors

Ph.D., Applied Mathematics, Courant Institute of Mathematical Sciences, New York University,
1968

M.S., Mathematics, Adelphi University, 1962

B.E.E., Engineering, Rensselaer Polytechnic Institute, 1958

Publications

Scialli AR, Ianucci J, Turim J. Combining perfluoroalkane acid exposure levels for risk assessment. *Regulatory Toxicology and Pharmacology* 2007; 49:195–202.

Turim J. Assessment of the risk of human cancer from exposure to refractory ceramic fibers using animal data. VDI – Berichte NR. 1776, Berlin, Germany, 2003.

Turim J and Brown RC. A dose-response model for refractory ceramic fibers. *Inhalat Toxicol* 2003; 15:1103–1118.

Moore MA, Boymel PM, Maxim LD, Turim J. Categorization and nomenclature of vitreous silicate wools. *Regulat Toxicol Pharmacol* 2002; 35:1–13.

Moolgavkar S, Turim J, Brown RC. Biopersistence, fiber length and cancer risk assessment for inhaled fibers. *Inhalat Toxicol* 2001; 13:755–772.

Brown RC, Turim J. The biopersistence and bioaccumulation of amphibole asbestos and vitreous fibres. Asbestos Health Effects Conference, Oakland, CA, 2001.

Subramaniam RP, Turim J, Golden SL, Kral P, Anderson EL. An exploratory study of variations in exposure to ETS in the United States. *Risk Anal* 2001; 21(3):561–574.

Moolgavkar S, Turim J, Brown RC. The power of the European Union protocol to test for carcinogenicity of inhaled fibers. *Regulat Toxicol Pharmacol* 2001; 33:350–355.

Moolgavkar S, Turim J, Brown R C, Luebeck G. Long man-made fibers and lung cancer rates. *Regulatory Toxicology and Pharmacology* 2001; 38(2):138–146.

Moolgavkar S, Luebeck G, Turim J, Brown RC. Lung cancer associated with exposure to man-made fibers. *Drug ChemToxicol* 2000; 23(1).

Anderson EL, Goldman S, Kral P, Subramaniam R, Turim J. Risk assessment of indoor air pollutants. Proceedings, 4th Princess Chulabhorn International Science Congress: Chemicals in the 21st Century. The Chulabhorn Research Institute, Bangkok, Thailand, November 28–December 2, 1999.

Moolgavkar S, Luebeck G, Turim J, et al. Quantitative assessment of the risk of lung cancer associated with occupational exposure to refractory ceramic fibers. *Risk Anal* 1998; 19(4).

Turim, J, Long A. EC adopts eco-management and audit regulation. *Leader's European Market Law Report*, June 1993.

Turim, J, Long A. EC adopts eco-management and audit regulation. *European Economic Community Law*, 1993.

Turim, J. Environmental assessments for property transfer. *Environ Claims J* 1991; 3:251–264.

Books Reviewed

Should We Risk It? Kammen DM, Hassenzahl DM. *Risk Anal* 1999; 19(5).

Calculating Risks. Hamilton JT, Viscusi WK. *Risk Anal* 2001; 21(3).

Presentations

Turim J, Turnham P, Griffin, J. Computing asbestos risk using mortality tables. Presented at the Society of Risk Analysis 23rd Annual Meeting, Baltimore, MD, 2003.

Turnham P, and Turim J. Dermal absorption of PCBs in non-aqueous carriers. Poster presented at the Society of Risk Analysis 23rd Annual Meeting, Baltimore, MD, 2003.

Turim J and Brown RC. Risk of lung cancer from exposure to various fibers. Poster presented 2001 Asbestos Health Effects Conference, Oakland, CA, 2001.

Turim, J. Assessment of the risk of human cancer from exposure to refractory ceramic fibers using animal data. VDI – Berichte NR. 1776, Berlin, Germany, 2003.

Turim J, Brown RC. Risk of lung cancer from exposure to various fibers. Poster presented 2001 Asbestos Health Effects Conference, Oakland, CA, 2001.

Turim J. Practical considerations in determining environmental liabilities. Conference on Environmental Impact Assessment and Ecobalances, London, England, November 12, 1992.

Turim J. Significance of environmental audits in real estate transactions. International Association of Corporate Real Estate Executives, St. Louis, MO, May 1990.

Turim J. Evaluating industrial risks through environmental audits. Presented at the IXth University of Occupational and Environmental Health and the First Pan Pacific Cooperative Symposium, Kitakyushu, Japan, October 1989.

Turim J. Environmental risk assessment. Presented at Pennsylvania Bureau of Waste Management Conference, Penn State University, September 1989.

Turim J. Risk assessment and environmental audits. Presented at the 4th Annual Hazardous Material Management Conference/West, Long Beach, CA, November 1988.

Turim J. Risk assessment and the Texas Eastern Pipeline. Presented at the Environmental Pollution Control Colloquium, Penn State University, August 1988.

Turim J. Role and utility of risk assessment in underwriting insurance policies. Presented at the

2nd Annual Hazardous Material Management Conference/West. Long Beach, CA, December 1986.

Turim, J. How safe is safe? Presented at the Toxicology Forum, Aspen, CO, August 1976.

Turim, J. The rebuttable presumption against registration and evaluation of risk/benefit data. Presented at the First National Seminar on the Registration and Regulation of Pesticides. Washington, DC, May, 1976.

Prior Experience

Executive Vice President, Sciences International, Inc., 1994–2006

Executive Vice President, Clement International Corporation, 1979–1993

Deputy Director, Office of Agency, Office of Toxic Programs Regulatory and Policy Affairs, U.S. Environmental Protection, 1976–1979

Project Experience

Risk Assessment

Fibers. Developed exposure-risk relationships for fibrous materials. Estimated future cases of asbestos disease for cohort of workers in asbestos-related industries. Acted as consulting expert working with testifying experts in asbestos litigation cases.

Management of Large-scale Government Contracts

ATSDR. As Deputy Project Director for the Agency for Toxic Substances and Disease Registry (ATSDR) contract for 5 years, oversaw all aspects of the contract, including quality control and technical review, assignment of chemicals to principal authors, budgeting, project scheduling, and production and final approval of draft and final deliverables.

EPA. Oversaw quality control functions on contract with the EPA Office of Waste Programs Enforcement to provide risk assessments, identify and prepare expert witnesses, and supply technical guidance for RCRA enforcement; also formulated internal policy and methods development, determined manpower allocation.

Toxic Torts

Legal Cases. Worked on behalf of defendants as consulting expert and expert witness in toxic tort cases involving environmental and occupational exposures. Assisted in the preparation of depositions and expert reports in connection with cases involving asbestos exposures.

Risk and Environmental Assessments

PCBs. Managed projects to provide technical and scientific support to the State of Pennsylvania Department of Environmental Resources in its development of policies to regulate

polychlorinated biphenyls and other hazardous substances and to develop sediment cleanup policy.

Hazardous Waste Sites. Directed teams, typically consisting of geologists, toxicologists, and environmental chemists, in the evaluation of the risk of chemical substances released into the environment at RCRA and Superfund sites as a support contractor for EPA. More than 100 Superfund sites were evaluated over a five-year period.

In addition, evaluated sites for private clients ranged from simple one chemical, one-pathway releases to state-regulated sites involving hundreds of chemicals and over a dozen pathways to human and ecological receptors.

Pesticides. Coordinated activities with trading company for pesticide, pharmaceutical, and risk assessment work with Japanese clients.

Risk Pooling. Supervised the risk assessment of a number of Pennsylvania counties as part of PENVIP, a risk pooling venture being developed by the Pennsylvania State Association of County Commissioners.

Endangerment Assessment. Project Director of a contract with EPA to provide endangerment assessments and public health evaluations of uncontrolled hazardous waste sites.

Risk Assessment Policy. Project Director for technical support contract with EPA Office of Waste Programs Enforcement to provide risk assessments, identify and prepare expert witnesses, and supply technical guidance for RCRA enforcement. Formulated internal policy and methods development, determined manpower allocation, and ensured quality control.

Liability Assessment. Managed, performed, and reviewed assessments of the operations of manufacturing and hazardous waste disposal facilities applying for environmental impairment liability insurance.

Scientific and Regulatory Policy Analysis

Chemical Ranking. Directed the development and application of procedures for selecting and ranking chemicals for review by the Interagency Testing Committee under TSCA; this included analyzing the comments from federal agencies.

Workplace Hazards. Directed multitask technical support work for OSHA in its development of a policy for regulating workplace carcinogens. This project entailed analyzing comments, preparing responses, supervising risk assessment, and providing analytical support in the rulemaking process.

Pesticides. At EPA, developed their scientific policy on pesticide registration and on key regulations under FIFRA. Developed 5-year strategy for implementing FIFRA and directed contract studies to support the strategy.

Technical Assistance. Directed technical assistance to EPA in monitoring and developing registration criteria for pesticides and other toxic pollutants. Also developed risk/benefit methodologies, risk estimation models, and economic impact analyses for EPA pesticide regulation.

Environmental Audits

Methodologies. Developed ranking and scoring systems and methodologies for conducting varieties of environmental audits in conjunction with insurance programs, property transfers, mergers and acquisitions, and compliance programs.

Audits. Conducted hundreds of audits for a large number of industrial sectors, including chemical and pharmaceutical manufacturers, automobile and manufacturers and dealerships, landfills, power and utility companies, light industries among many others.

Underground Storage Tanks

Removal, Remediation, Risk. Managed local tank removal firms, directed sampling efforts, and interacted with state regulatory agencies concerning removal activities. Also led remediation efforts that have resulted from leaking tanks. This has involved assessing the risks to human and ecological receptors from contaminants migrating through soil, water, and air pathways.

Peer Reviewer

- *Risk Analysis*

Professional Affiliations

- Society of Risk Analysis