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Nga Tran, Dr.P.H., M.P.H.
Principal Scientist | Chemical Regulation and Food Safety
Washington DC
+1-202-772-4915 | ntran@exponent.com

Professional Profile

Dr. Tran has more than 20 years of experience in exposure and risk assessment. She has extensive experience in evaluating the safety of foods and food ingredients, additives and contaminants, feed additives, cosmetics and consumer care products.

Dr. Tran has provided technical support and prepared a variety of reports and submissions to regulatory authorities including Generally Recognized as Safe (GRAS) notifications, food contact notifications (FCN), food and color additive petitions (FAP and CAP) to the FDA and food additive submissions to Health Canada, JECFA, and EFSA. Dr. Tran also has extensive experience in conducting scientific review for the substantiation of health claims. She has developed regulatory strategies for FDA-regulated products in support of product development and claims, pre-market approval and product defense.

Dr. Tran has extensive experience dietary exposure assessment and public health risk modeling. She has successfully applied risk apportionment models to evaluate contribution of dietary and lifestyle risk factors to diseases, such as dietary cholesterol and coronary heart diseases. She has developed systematic methods of evaluating beneficial effects of food and food ingredients for substantiation of health claims and developed models to quantify health benefits of GM crops. Dr. Tran has also worked extensively on risk ranking methodologies for a wide range of risk management purposes. Her work in the risk ranking arena has included the development of tools to prioritize food risks (both chemical and microbial), environmental health risk ranking framework for military deployments, risk based site selection model to prioritize U.S pharmaceutical manufacturing sites for cGMP inspection, and exposure and risk screening methodologies for consumer personal care products. Complementary to her risk assessment work, Dr. Tran also led the development of the peer review procedures for food safety risk assessments for FDA's Center for Food Safety and Applied Nutrition (CFSAN).

Academic Credentials & Professional Honors

Dr.P.H., Public Health, Johns Hopkins University, 1995

M.B.A., Business Administration, DePaul University, 1991

M.P.H., Public Health, Yale University, 1985

B.A., Biology, Whitman College, 1982

Professional Affiliations

American Society for Nutrition

American Board of Industrial Hygiene

American Public Health Association

International Society of Exposure Analysis

Society for Risk Analysis

Publications

Heilman J, Anyangwe N, Tran N, Edwards, J, Beilstein P, Lopez J. Toxicological evaluation of an olive extract, H35: Subchronic toxicity in the rat. Food and Chemical Toxicology 2015; 84:18-28

Tran NL, Barraj LM, Heilman JM, Scrafford CG. Egg consumption and cardiovascular disease among diabetic individuals: A systematic review of the literature. Diabetes, Metabolic Syndrome and Obesity 2014 Mar; 7:121-137.

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Lamb J, Hentz K, Schmitt D, Tran N, Jonker D, Junker K. A one-year oral toxicity study of sodium stearoyl lactylate (SSL) in rats. Food and Chemical Toxicology 2010; (48)2663-2669.

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Tran N, Barraj L. Contribution of specific dietary factors to CHD in US females. Public Health Nutrition 2009; 13(2):154-162.

Schmier JK, Barraj LM, Tran NL. Single food focus dietary guidance: Lessons learned from an economic analysis of egg consumption. Cost Eff Resour Alloc 2009; 7(1):7.

Newsome R, Tran N, Paoli GM, Jaykus LA, Tompkin B, Miliotis M, Ruthman T, Busta EF, Petersen B, Shank F, McEntire J, Hotchkiss M, Wagner M, Schaffner DW. Development of a risk-ranking framework to evaluate potential high-threat microorganisms, toxins, and chemicals in food. Institute of Food Technologists, Journal of Food Science 2009; (00):R1-R7.

Barraj LM Tran NL, Mink P. A comparison of egg consumption with other modifiable coronary heart disease lifestyle risk factors: A relative risk apportionment study. Risk Analysis 2009; 29(3):401:415.

LaKind JS, Barraj L, Tran N, Aylward L. Environmental chemicals in people: Challenges in interpreting

biomonitoring information. Journal of Environmental Health 2008; May; 70(9):61-64.

Barraj LM, Tran N, Goodman M, Ginevan ME. Perspective: Risk apportionment and disease intervention strategies. Risk Analysis 2008; 28(2):1-10.

Schmitt D, Tran N, Riefler S, Jacoby J, Merkel D, Marone P, Naouli N. Toxicologic evaluation of modified gum acacia: Mutagenicity, acute and subchronic toxicity. Food Chemical Toxicology 2008; 46(3):1048-1054.

Tran NL, Barraj L. Food as exposure: measuring dietary intake and consumption patterns. In: Epidemiologic Principles and Food Safety. Laksy T (ed), Oxford University Press, New York, pp. 76-95, 2007.

Tran NL, Rachman N, Miller A. Exposure assessment for foodborne pathogens. In: Food Consumption and Disease Risk: Consumer-Pathogen Interactions. Potter M, (ed), Woodhead Publishing and CRC Press, Cambridge, England, pp.113-136, 2006.

Petersen BJ, Tran NL. Exposure to Acrylamide: Placing exposure in context. In: Chemistry and Safety of Acrylamide in Food. Friedman M, Mottram DS (eds), Springer, New York, pp. 63-76, 2005.

Tran NL, Hasselbalch B, Morgan K, Claycamp G. Elicitation of expert knowledge about risks associated with pharmaceutical manufacturing process. Pharmaceutical Engineering 2005; 24-38, July/August.

Fox MA, Tran NL, Groopman JD, Burke TA. Toxicological resources for cumulative risk: An example with hazardous air pollutants. Regulatory Toxicology and Pharmacology 2004; 40(3):305-11.

Teta MJ, Tran NL, Mink PJ, Barraj LM. Validity of using background leukemia incidence rates with cohort mortality-based potency estimates to calculate excess lifetime risk. Human and Ecological Risk Assessment 2004; 10(5):1-16.

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Tran NL, Barraj L, Smith K, Javier A, Burke T. Combining food frequency and survey data to quantify long-term dietary exposure: A methyl mercury case study. Risk Analysis2004; 24(1):19-30.

Litt JS, Tran NL, Burke TA. Examining urban Brownfields through the public health ‘macroscope.' Environmental Health Perspective 2002; 110(Supplement 2):183-193. Tran NL, Locke PL, Burke TA. Perspectives—Chemical and radiation environmental risk management: Differences, commonalities and challenges. Risk Analysis 2000; 20(2):163-172.

Shalauta NM, Burke TA, Gordon LJ, Stern B, Tran NL. An examination of the education needs for environmental health and protection. Journal of Public Health Management and Practice 1999; 5(6):1-12.

Tran NL, Burke TA, Fox MA, Litt JS, Shalauta NM, Ruscio B. Environmental health risk assessment methods for application in overseas military deployment. Johns Hopkins APLTechnical Digest 1999; 20(3).

Burke TA, Shalauta N, Tran NL, Stern B. The environmental web: A national profile of the state infrastructure for environmental health and protection. Journal of Public Health Management and Practice 1997; 3(2):1-12.

Tomerlin JR, Berry MR, Tran NL, Chew S, Petersen BJ, Fleming KH. Development of an exposure potential matrix for evaluating dietary exposure to chemical residues in foods. International Journal of Exposure Analysis and Environmental Epidemiology 1997; 7(1):81-101.

Burke TA, Shalauta N, Tran NL. Strengthening the role of public health in environmental policy. Environmental Health Symposium. Journal of Policy Studies Review 1995; 23(1).

Burke TA, Tran NL, Henry C, Roemer J (eds). Regulating Risk: The Science and Politics of Risk. ILSI Press, Washington, DC, 1993.

Burke T, Anderson H, Beach N, Colome S, Drew RT, Firestone M, Hauchman F, Miller TO, Wagener D, Ziese L, Tran N. The role of exposure databases in risk management. Archives of Environmental Health 1992; 47(6).

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Tran NL, Barraj LM, Bi X, Jack MM. United StatesTrends and patterns of caffeine consumption among US teenagers and young adults, NHANES 2003-2012. Food and Chemical Toxicology 2016; 94: 227-242.

Barraj L, Murphy M, Tran N, Petersen B. Chemistry, manufacturing and exposure assessments to support generally recognized as safe (GRAS) determinations. Regul Toxicol Pharmacol. 2016 Aug;79 Suppl 2:S99-S104.

Tran NL, Barraj LM, Collinge S. Reduction in Dietary Acrylamide Exposure-Impact of Potatoes with Low Acrylamide Potential. Risk Anal. 2017 Sep;37(9):1754-1767. doi: 10.1111/risa.12709. Epub 2016 Nov 20. PMID: 27866376.

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Tran, NL, Barraj LM, Scrafford C, Bi X, and Troxell T. Partitioning of dietary metal intake—a metal dietary exposure screening tool. Risk Anal. 2015; 35(5):872-81.

Project Experience

Conducted exposure and safety assessment for a number of food ingredients, prepared GRAS dossiers, and facilitated expert panel reviews.

Conducted evidence based reviews for substantiation of health claims.

Conducted analyses to assess exposure and risks from contaminants in foods, including acrylamide, lead, arsenic, methyl mercury, and benzene.

Conducted a risk apportionment study to examine the relative contribution of dietary cholesterol and eggs to coronary heart diseases and evaluated CHD risk in context of benefits from egg consumption.

Conducted a risk assessment for thermal inactivation of Salmonella spp. in fresh pork.

Modeled the benefit of Bt Corn in reducing mycotoxin in animal feed.

Developed peer review procedures for food safety risk assessment for FDA Center for Food Safety and Applied Nutrition (CFSAN).

Worked with the Institute of Food Technologists (IFT) to develop a risk-ranking framework that prioritizes food safety hazards (both microbiological and chemicals) and evaluates the impact of control measures and practices.

Worked with FDA, CDER, Office of Compliance Director to develop of a risk based site selection model to prioritize U.S pharmaceutical manufacturing sites for cGMP inspection.

Worked with member companies of the Soap and Detergent Association to develop exposure and risk screening methodologies and consumer habit and practice information. The methods and data are intended for use in screening-level risk assessments of environmental and human exposures to high production volume chemicals (HPV) through the manufacturing and use of consumer products, mainly laundry, cleaning and personal care products.

Reviewed the Armed Forces Medical Intelligence Center (AFMIC) Environmental Health Index (EHI) model, a ranking model of environmental health threats worldwide.

Conducted a study to evaluate the legal framework and the roles and responsibilities of the various agencies involved in the inspection and prevention of public health threats from the importation of animals.

Collected and synthesized information on the current federal infrastructure to address animal diseases on farm and in wildlife and prepared a white paper to support the deliberation and work of the National Academy of Sciences, Board on Agriculture and Natural Resources, Committee on Assessing the Nation’s Framework for Addressing Animal Diseases.

Conducted a study to evaluate the public health burden from acute pesticide poisoning in developing countries. Evaluated all current scientific information, including WHO surveillance data, governmental data from developing countries, peer-reviewed published literature ranging from accidental dietary poisoning, occupational poisoning to intentional poisoning; and synthesized the disparate information in context of public health burden.

Under contract with the World Bank, conducted analysis to evaluate the relationship between toxic exposure and poverty in the developing countries.

Directed and conducted human health risk related research at cleanup sites, including evaluating current and future risks associated with environmental insurance for pollution legal liabilities and environmental clean up projects.

Developed strategies to integrate public health assessment/surveillance with risk assessments for Air Force base cleanups under Superfund and Base Realignment and Closure Commission (BRAC); and evaluating disconnect and opportunities for harmonizing assessment and management of radiation and chemical risks at a number of cleanup sites.

Conducted risk prioritization research and developed a decision-making framework for assessing short and long-term environmental health threats to military personnel deployed overseas.

Served as a consultant for the Center for National Health Statistics and evaluated environmental health risk information and provided technical advice to the National Health and Nutrition Examination Survey (NHANES) staff on the quantitative analysis and interpretation of biomarker results from NHANES.

Developed an algorithm to prioritize foods based on their potential contribution to population exposure to toxic chemicals; conducted worker exposure assessment for an occupational epidemiology study; conducted research on population dietary exposure to Ethylene bis-dithiocarbamates and Ethylene Thiourea and developed a comprehensive framework that includes an evaluation of field measurements, survey designs and probabilistic approach to exposure and risk assessment.

Directed a broad range of public affairs programs, including public issue management, community and media relations, legislative affairs, risk communication, and industry liaison, as Manager of Public Affairs at Morton International Inc. (MTI). Responsibilities included: advising senior corporate officers on public policy questions; designing and implementing public risk communication and employee communication on health, safety and environmental issues; counseling and training facility managers on effective community relations; and operating a legislative affairs program.

Developed and implemented occupational safety and health programs for over 30 manufacturing facilities; designed and managed ongoing accident-incident-illness statistical studies; provided guidance on occupational health, safety and environmental issues to field personnel; and conducted industrial hygiene/exposure assessment surveys, safety audits and employee training programs at chemical production facilities nationwide, as a Senior Health & Safety Administration at MTI.

Managed the product stewardship program for the company, including developing and implementing a chemical hazard assessment program for over 400 chemical specialty products as a Product Safety Administrator at MTI. Provided regulatory guidance to sales/marketing on issues relating to OSHA, TSCA, EPA, DOT regulations and Hazard Communication standard.