

George M. Gray
Curriculum Vitae
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Professor of Environmental and Occupational Health
Director, Center for Risk Science and Public Health
George Washington University
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EDUCATION

Ph.D., Toxicology,

University of Rochester School of Medicine and Dentistry, Rochester, New York. 1989
Dissertation : Growth Factor Signal Transduction and Interaction with the *v-src* Oncogene Product

M.S., Toxicology,

University of Rochester School of Medicine and Dentistry, Rochester, New York. 1988

B.S., Biology,

University of Michigan, Ann Arbor, Michigan. 1985

PROFESSIONAL EXPERIENCE

Professor, Department of Environmental and Occupational Health; **Director**, Center for Risk Science and Public Health, George Washington University School of Public Health and Health Services, Washington, DC. 2010-date

Assistant Administrator, Office of Research and Development; **Agency Science Advisor**, U.S. Environmental Protection Agency, Washington, D.C. 2005-2009

Executive Director, Harvard Center for Risk Analysis; **Lecturer**, Department of Health Policy and Management, Harvard University School of Public Health, Boston MA. 1999-2005

Instructor in Risk Analysis, Department of Health Policy and Management, Harvard University School of Public Health, Boston MA. 1994 - 1999

Research Associate, Center for Risk Analysis, Harvard University School of Public Health, Boston MA. 1991-1994

Research Fellow, Program in Environmental Health and Public Policy, Interdisciplinary Programs in Health, Harvard University School of Public Health, Boston, MA. 1989-1991

PEER-REVIEWED PUBLICATIONS

- Gray, G. (2011) Hormesis in Regulatory Risk Assessment – Science and Science Policy. *Dose Response* **9**: 158-164
- Cohen, J.T. and Gray, G.M. (2010) Letter to the Editor. *Risk Analysis* **30**:1457-1458
- Murray, R., Hart, W.E., Phillips, C.A., Berry, J., Boman, E.G., Carr, R.D., Riesen, L.A., Watson, J., Haxton, T., Herrmann, J.G., Janke, R., Gray, G., Taxon, T., Uber, J.G. and Morley, K.M. (2009) US Environmental Protection Agency Uses Operations Research to Reduce Contamination Risks in Drinking Water. *INTERFACES* **39**: 57-68.
- Collins, F.S., Gray, G.M., Bucher, J.R. (2008) Toxicology. Transforming Environmental Health Protection. *Science* **319**:906-7
- Kerret, D., Gray, G.M. (2007) What Do We Learn from Emissions Reporting? Analytical Considerations and Comparison of Pollutant Release and Transfer Registers in the United States, Canada, England, and Australia. *Risk Analysis* **27**: 203-223
- Loh, M.M., Houseman, E.A., Gray, G.M., Levy, J.I., Spengler, J.D., Bennett, D.H. (2006) Measured Concentrations of VOCs in Several Non-residential Microenvironments in the United States. *Environmental Science and Technology* **22**: 6903-6911

- Cohen, J.T. , Bellinger, D., Connor, W.E. , Kris-Etherton, P.M. , Lawrence, R.S. , Savitz, D.S. , Shaywitz, B. , Teutsch, S.M. , Gray, G. (2005) A Quantitative Risk-Benefit Analysis of Changes in Population Fish Consumption. *American Journal of Preventive Medicine* **29**:325-334
- König, A., Bouzan, C., Cohen, J.T., Connor, W.E., Kris-Etherton, P.M., Gray, G.M., Lawrence, R.S., Savitz, D.A. Teutsch, S.M. (2005) A Quantitative Analysis of Fish Consumption and Coronary Heart Disease Mortality. *American Journal of Preventive Medicine* **29**:335-346
- Bouzan, C., Cohen, J.T., Connor, W.E., Kris-Etherton, P.M., Gray, G.M., König, A., Lawrence, R.S., Savitz, D.A., Teutsch, S.M. (2005) A Quantitative Analysis of Fish Consumption and Stroke Risk. *American Journal of Preventive Medicine* **29**:347-352
- Yokota, F., Gray, G., Hammitt, J.K., Thompson, K.M. (2004) Tiered Chemical Testing: A Value of Information Approach. *Risk Analysis* **24**(6):1625-1639
- Gray, G.M., Cohen, J.T., Cunha, G., Hughes, C., McConnell, E.E., Rhomberg, L., Sipes, I.G., and Mattison, D. (2004) Weight of the Evidence Evaluation of Low-Dose Reproductive and Developmental Effects of Bisphenol A. *Human and Ecological Risk Assessment* **10**:875-921
- Brock, W.J., Rodricks, J.V., Rulis, A., Dellarco, V.L., Gray, G.M., and Lane, R.W. (2003) Food Safety: Risk Assessment Methodology and Decision Making Criteria. *International Journal of Toxicology* **22**:435-451
- Gray, G.M., and Ropeik, D. (2002) Risk Communication and Dealing with the Dangers of Fear. *Health Affairs* **21**(6):106-116
- Habtemariam, T., Tameru, B., Nganwa, D., Ayanwale, L., Ahmed, A., Oryang, D., AbdelRahman, H., Gray, G., Cohen, J., Kreindel, S. (2002) Application of Systems analysis in Modeling the Risk of Bovine Spongiform Encephalopathy (BSE). *Kybernetes* **31**:1380-1390.
- Gray, G.M., Huang, H., Linkov, I., Polkanov, M., and Wilson, R. (2002) The Effect of Different Tumor Groupings on Findings of Anticarcinogenic Responses in Long-Term Rodent Bioassays. *Regulatory Toxicology and Pharmacology* **36**:139-148
- Kuo, J., Linkov, I., Rhomberg, L., Polkanov, M., Gray, G.M., and Wilson, R. (2002) Absolute Risk or Relative Risk? A Study of Intraspecies and Interspecies Extrapolation of Chemical-Induced Cancer Risks. *Risk Analysis* **22**:141-157
- Gray GM, Baskin SI, Charnley G, Cohen JT, Gold LS, Kerkvliet NI, Koenig HM, Lewis SC, McClain RM, Rhomberg LR, Snyder JW, Weekley LB. (2001) The Annapolis accords on the use of toxicology in risk assessment and decision-making: An Annapolis Center workshop report. *Toxicology Methods* **11** (3): 225-231
- Gray, G.M., and Hammitt, J.K. (2000) Risk/Risk Trade-offs in Pesticide Regulation: An Exploratory Analysis of the Public Health Effects of a Ban on Organophosphate and Carbamate Pesticides. *Risk Analysis* **20**:665-680
- Gray, G.M. (2000) Rodent Cancer Bioassays – Is Body Weight Depression Hormetic? *Human & Experimental Toxicology* **19**:332-334
- Gray, G.M., Linkov, I., Polkanov, M., and Wilson, R. (2000) Liver Adenomas and Carcinomas: Correlations and Relationship to Body Weight in Long-Term Rodent Cancer Bioassays. *Toxicology and Industrial Health*, **16**: 1-13.
- Linkov, I., Polkanov, M., Wilson, R., and Gray, G.M. (2000) Correlations Among Tumor Types in Mouse Cancer Bioassays: Liver Adenomas, Liver Carcinomas, Leukemias and Lymphomas. *Toxicology and Industrial Health* **16**:16-40
- Gray, G.M., Goldstein, B.D., Bailar, J., Davis, D.L., Delzell, E., Dost, F., Greenberg, R.S., Hatch, M., Hodgson, E., Ibrahim, M.A., Lamb, J., Lavy, T., Mandel, J., Monson, R., Robson, M., Shore, R., and Graham, J.D. (2000) The Federal Government's Agricultural Health Study: A Critical Review with Suggested Improvements. *Human and Ecological Risk Assessment* **6**:47-72
- Linkov, I., Wilson, R. and Gray, G.M. (1999). Erratum to Toxicological Sciences 43:1-9 and Toxicological Sciences 43:10-18. *Toxicological Sciences* **48**:141-142.
- Gray, G.M., Allen, J.C., Burmaster, D.E., Gage, S.H., Hammitt, J.K., Kaplan, S., Keeney, R.L., Morse, J.G., North, D.W., Nyrop, J.P., Stahevitch, A., and Williams, R. (1998) Principles for Conduct of Pest Risk Analyses: Report of an Expert Workshop. *Risk Analysis* **18**:773-780
- Linkov, I., Wilson, R., and Gray, G.M. (1998) Anticarcinogenic Responses in Rodent Bioassays are Not Explained by Random Effects. *Toxicological Sciences* **43**:1-9
- Linkov, I., Wilson, R., and Gray, G.M. (1998) Weight and Survival Depression in Rodent Bioassays With and Without Tumor Decreases. *Toxicological Sciences* **43**:10-18

- Ohanian, E.V., Moore, J.A., Fowle, R. J. III, Omenn, G.S., Lewis, S.C., Gray, G.M., and North, D.W. (1997) Risk Characterization: A Bridge to Informed Decision Making. *Fundamental and Applied Toxicology* **39**:81-88
- Gray, G.M., Li, Ping, Shlyakhter, I., Wilson, R. (1995) An Empirical Examination of Factors Influencing Prediction of Carcinogenic Hazard Across Species. *Regulatory Toxicology and Pharmacology* **22**:283-291
- Gray, G.M., and Hartwell, J.K. (1995) The Chemical Substitution Tree: A Framework to Evaluate Risk in Chemical Substitution Decisions. *Pollution Prevention Review* **5**:7-17
- Smith, A.E., Gray, G.M., and Evans, J.S. (1995) The Ability of Predicted Internal Dose Measures to Reconcile Tumor Bioassay Data for Chloroform. *Regulatory Toxicology and Pharmacology* **21**:339-351
- Evans, J.S., Gray, G.M., Sielken, R.L., Jr., Smith, A.E., Valdez-Flores, C., and Graham, J.D. (1994) Use of Probabilistic Expert Judgment in Uncertainty Analysis of Carcinogenic Potency. *Regulatory Toxicology and Pharmacology* **20**:15-36
- Evans, J.S., Graham, J.D., Gray, G.M., and Sielken, R.L., Jr. (1994) A Distributional Approach to Characterizing Low-Dose Cancer Risk. *Risk Analysis* **14**:25-34
- Laden, F., and Gray, G.M. (1993) Toxics Use Reduction: Pro and Con. *Risk: Issues in Health and Safety* **4**:213-234
- Gray, G.M., Cohen, J.T., and Graham, J.D. (1993) The Challenge of Risk Characterization: Current Practice and Future Directions. *Environmental Health Perspectives Supplements* **101**:203-208
- Rosenthal, A., Gray, G.M., and Graham, J.D. (1992) Legislating Acceptable Cancer Risk from Exposure to Toxic Chemicals. *Ecology Law Quarterly* **19**:269-362
- Evans, J.S., Graham, J.D., Gray, G.M., Hollis, A., Ryan, B., Smith, A., Smith M., and Taylor, A. (1992) Summary of Workshop to Review an OMB Report on Risk Assessment and Management. *Risk: Issues in Health and Safety* **3**:71-84
- Gray, G.M., and Graham, J.D. (1991) Risk Assessment and Clean Air Policy. *Journal of Policy Analysis and Management* **10**:286-295
- Gray, G.M., and Macara, I.G. (1989) Serum-stimulated Phosphatidylinositol Turnover is Enhanced in 3T3 Cells with Active pp60v-src. *Oncogene* **4**:1213-1217
- Gray, G.M., Wei, C., and Macara, I.G. (1989) Specific Desensitization of the Epidermal Growth Factor Receptor by pp60vsrc. *Journal of Cellular Biochemistry* **40**: 271-278
- Gray, G.M., and Macara, I.G. (1988) The pp60v-src Tyrosine Kinase Desensitizes Epidermal Growth Factor Binding to 3T3 Fibroblasts by Two Distinct Protein Kinase C Independent Mechanisms. *Journal of Biological Chemistry* **263**:10714-10719
- Macara, I.G., and Gray, G.M. (1987) Vanadate-Activated Calcium Influx in A431 Cells Is Dependent on the Plasma Membrane Potential. *Journal of Cellular Biochemistry* **34**:125-128

BOOKS, CHAPTERS, REPORTS AND MONOGRAPHS

- Dudley, S.E and Gray, G (2012) *Improving the Use of Science to Inform Environmental Regulation in Institutions and Incentives in Regulatory Science* (J. Johnston ed.) Lexington Books, New York, NY (forthcoming)
- Gray, G (2011) The Challenge of Cumulative Risk Assessments. *The Environmental Forum* **28**: 51
- Gray, G., Rogers, M.D., and Wiener, J.B. (2010) *Beef, Hormones, and Mad Cows in The Reality of Precaution: Comparing Risk Regulation in the United States and Europe* (J.B. Wiener, M.D. Rogers, J.K. Hammitt and P.H Sand eds.) RFF Press/Earthscan, Washington DC
- Joshua T. Cohen, Keith Duggar, George M. Gray, Silvia Kreindel, Hatim Gubara, Tsegaye HabteMariam, David Oryang, Berhanu Tameru (2003) *A Simulation Model for Evaluating the Potential for Spread of Bovine Spongiform Encephalopathy to Animals or to People* in Prions and Mad Cow Disease (I. Krull, ed.) Macell Dekker, Marcel Dekker, New York, NY
- Courtney, A.K., Porretta, M., Cohen, J.T., Gray, G.M., Kreindel, S., and Gallagher, D.L. (2003) *Bovine Spongiform Encephalopathy: Risk Assessment and Governmental Policy* in Microbial Food Safety in Animal Agriculture (M.E. Torrence and R.E. Isaacson, eds.) Iowa State Press, Ames IA
- Ropeik, D., and Gray, G. (2002) *Risk: A Practical Guide to Deciding What's Really Safe and What's Really Dangerous in the World Around You*. Houghton Mifflin, Boston.
- Joshua T. Cohen, Keith Duggar, George M. Gray, Silvia Kreindel, Hatim Gubara, Tsegaye HabteMariam, David Oryang, Berhanu Tameru (2001) *Evaluating the Potential for Spread of BSE in the United States*. Report to US Department of Agriculture
- Gray, G.M., and Hammitt, J.K. (2000) *Risk Tradeoffs in Pesticide Regulation: Substitutes and Income*

- Effects in Foresight and Precaution* (Cottam, Harvey, Pape and Tait, eds.) Balkema Press, Rotterdam.
- Gray, G.M. (1999) *Measure Risk, Not Just Emissions*. Regulation 22:12-15
 - Gray, G.M. (1999) *Toxic Pollution from Powerplants: Large Emissions, Little Risk*. Risk in Perspective (Volume 7, Issue 2). Harvard Center for Risk Analysis, Boston, MA
 - Gray, G.M., and Graham, J.D. (1998) *The Agricultural Health Study: Strengths and Limitations*. Risk in Perspective (Volume 6, Issue 9). Harvard Center for Risk Analysis, Boston, MA
 - Gray, G.M., Saligman, L., and Graham, J.D. (1997) *Risk Assessment and the Accelerated Phase-out of Lead in Gasoline* in *The Greening of Industry* (Graham, J.D. and Hartwell, J.K., eds) Harvard University Press.
 - Gray, G.M., Jeffery, W.G., and Marchant, G.E. (1997) *Risk Assessment and Risk Management of Non-Ferrous Metals: Realizing the Benefits and Managing the Risks*. Book published by International Council on Metals and the Environment, Ottawa, Ontario, Canada.
 - Gray, G.M. (1997) *Forget Chemical Use, Let's Report Risk!* Risk in Perspective (Volume 5, Issue 4). Harvard Center for Risk Analysis, Boston, MA
 - Gray, G.M. (1996) *Key Issues in Environmental Risk Comparisons: Removing Distortions and Ensuring Fairness*. Reason Foundation Policy Study No. 205. Reason Foundation, Los Angeles, CA.
 - Gray, G.M., and Graham, J.D. (1995) *Risk-Risk Tradeoffs in Pesticide Regulation* in *Weighing the Risks* (Graham, J.D. and Wiener, J., eds.) Harvard University Press.
 - Gray, G.M. (1994) *Complete Risk Characterization*. Risk in Perspective (Volume 2, Number 4). Harvard Center for Risk Analysis, Boston, MA
 - Gray, G.M., and Graham, J.D. (1993) *Intuitive Toxicology: Comments on Public Perceptions and the Role of Institutional Affiliation in Expert Opinions*. *Comments on Toxicology* 4:501-504
 - Evans, J.S., Graham, J.D., Gray, G.M., Sielken, R.L., Jr., and Smith, A.E. (1993) *The Likelihood of Alternative Carcinogenic Potencies: Uncertainty Analysis of Chloroform*. Proceedings of the First International Conference on the Safety of Water Disinfection, ILSI Press, Washington, D.C.
 - Gray, G.M., and Graham, J.D. (1993) *Optimal use of "Toxic Chemicals"* Risk in Perspective (Volume 1, Number 2). Harvard Center for Risk Analysis, Boston, MA
 - Graham, J.D., and Gray, G.M. (1992) *Air Toxics: Characterizing the Risks*. in *Toxic Air Pollutants from Mobile Sources*, Air and Waste Management Association, Pittsburgh, PA, 43-52
 - Macara, I.G., Gray, G.M., Gaut, J., Coco, A., Wingrove, T., Faletto, D., and Wolfman, A. (1989) *Growth Factors, Oncogenes, and Protein Kinase C*. in *Cell Calcium Metabolism*, (G. Fiskum, ed.) Plenum Publishing Corp. 249-254
 - Macara, I.G., and Gray, G.M. (1988) *Characterization of the Epidermal Growth Factor- and Vanadate-Activated Calcium Influx in A431 Cells*. in *Growth Factors, Tumor Promoters, and Cancer Genes*, Alan R. Liss, Inc. 233-238
 - Macara, I.G., Gray, G.M., Gaut, J., Coco, A., Wingrove, T., Faletto, D., and Wolfman, A. (1987) *Growth Factors, Oncogenes, and Protein Kinase C*. *Current Communications in Molecular Biology*, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY

RESEARCH SUPPORT

1993	Chemical Substitution in Pollution Prevention (PI)	MA Toxics Use Reduction Institute
1994-1996	Tumor Sites: Correspondence with Toxic Lesions and Concordance Across Species (PI)	US EPA
1994-1997	Distributional Analysis of Risk for Decision Support (PI)	US EPA
1998-1999	Anticarcinogenic Responses in Rodent Bioassays (Co-PI)	Elsa U. Pardee Foundation
1994-1997	Distributional Analysis of Risk for Decision Support (PI)	US EPA
1998-2001	Assessing the Potential for BSE in the United States (PI)	USDA
1999-2000	Methods for Benefit-Cost Analysis of Drinking Water Contaminants (PI)	US EPA
2000-2001	Evaluation of Potential Low-Dose Effects of	Society of the Plastics

	Bisphenol A (Co-PI)	Industry
2001-2002	Educating Journalists about Risk (PI)	D&D Foundation
2002	BSE Analysis and Training (PI)	USDA
2002-2004	Risk/Risk Tradeoffs: Evaluating the Risks and Benefits of Policies That Reduce Consumption of Fish (PI)	National Food Processors Association Research Foundation
2003-2005	Human Health Risk Assessment – Kuwait following Gulf War (Co-PI)	United Nations /Government of Kuwait
2003-2005	BSE/CWD Risk Assessment and Technical Support (PI)	FDA (via IFT)
2004	BSE Risk Assessment Update (PI)	USDA

TEACHING

HSPH RDS 501 - Regulatory Toxicology

Developed (1993) new Masters level course for industrial hygiene and environmental management students. Course now required for Environmental Science and Risk Management Masters and Doctoral students (2000, 2001, 2002, 2003, 2004, 2005).

HSPH Toxicology 204 - Principles of Toxicology

Teach modules on neurotoxicology and toxicology of pesticides and solvents in class for Masters and Doctoral students (1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2005, 2005).

HSPH Environmental Health 202

Teach modules on quantitative methods of risk assessment and risk communication to Masters students (1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005).

HSPH Continuing Professional Education Course - Analyzing Risk: Science, Assessment and Management

Course Director and member of faculty for Continuing Education Course aimed at the regulatory, industrial, and legal communities (1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)

HSPH Continuing Professional Education Course – The Risk Communication Challenge

Co-Director and member of faculty for Continuing Education Course offered in the US and Europe for the academic, regulatory, industrial, and legal communities (1999, 2000, 2001, 2002, 2003, 2004, 2005)

HSPH Continuing Professional Education Course –Analyzing Regulations: Health, Safety and the Environment

One of three faculty for Continuing Education Course on regulatory assessment and benefit cost analysis for government, industrial, and legal communities (1999, 2000, 2001, 2002, 2003, 2004, 2005)

Harvard Institute for International Development Economic and Policy Analysis Workshop

Teach principles of risk assessment and management to international students (1996, 1997, 1998, 1999).

HSPH Environmental Health 260 - Fundamentals of Exposure and Risk Assessment

Taught principles and methods of toxicology for risk assessment to Masters and Doctoral students (1991, 1992, 1993, 1994, 1995, 1996).

GWU SPHHS PH 6004 - Environmental and Occupational Health in a Sustainable World

Core Environmental and Occupational Health course for all MPH students (2010, 2011)

GWU SPHHS PH 8411 – Advanced Topics: Principles of Environmental Health Risk Science

Doctoral seminar on risk assessment, management and communication (2010)

GWU SPHHS PH 6123 – Applied Toxicology

Doctoral and Master's level course emphasizing the science of toxicology and its application to health risk assessment (2011)

GWU SPHHS PH 8412 – Advanced Topics: Environmental and Occupational Health

Research and Practice. Doctoral seminar on role of EOH science in government, academia and the private sector (2012)

SELECT RECENT INVITED PRESENTATIONS:

May, 2000	MIT Knight Journalism Fellows Program, Cambridge, MA	<i>The Importance of Risk Communication</i>
May, 2000	USDA Pest Risk Analysis Workshop, Washington, D.C	<i>Qualitative Pest Risk Analysis and Its Role in a Tiered Approach</i>
October, 2000	University of Rochester Alumni Day Speaker, Rochester, NY	<i>The Future of Risk Assessment: More Toxicology, Not Less</i>
March, 2002	Consumer Federation of America, Consumer Assembly, Washington, D.C.	<i>Matchmaking: Risk Analysis and the Precautionary Principle</i>
October, 2002	JIFSAN/NCFST Workshop on Acrylamide in Food, Chicago, IL	<i>Communicating About Risk</i>
January, 2003	Academy Health/Health Affairs, National Health Policy Conference, Washington, D.C.	<i>Organizing to Confront Terrorism: The Role of Risk Communication</i>
April, 2004	Erasmus Center for Law and Society R. Pieterman Symposium, Rotterdam, Netherlands	<i>Risk Analysis and the Precautionary Principle</i>
May, 2005	Porter School of Environmental Studies, Tel Aviv University, Tel Aviv, Israel	<i>Confronting Risk</i>
August, 2005	International Conference on Sanitary & Phytosanitary (SPS) Risk Assessment Methodology, Washington, D.C.	<i>Challenges in Sanitary and Phytosanitary Risk Assessment</i>
November, 2006	U.S. EPA International Workshop on Uncertainty and Variability in Physiologically Based Pharmacokinetic (PBPK) Models, Research Triangle Park, NC	<i>Getting Serious About Uncertainty and Variability</i>
November, 2008	U.S./EU TransAtlantic Risk Dialogue, Brussels Belgium	<i>Emerging Issues in Risk Assessment and Talking About Risk</i>
April, 2009	U.S. EPA Workshop Decision Analysis: Supporting Environmental Decision Makers, Cincinnati, OH	<i>Characterizing Uncertainty for Sound Decisions</i>
September, 2009	OECD Workshop on Risk Assessment of Manufactured Nanomaterials in a Regulatory Context, Washington, DC	<i>Comparing Risk Assessments of NanoSilver</i>
November, 2009	World Health Organization/International Council on Non-Ionizing Radiation Protection Workshop "Risk Assessment and Terminology" Salzburg, Austria	<i>Characterizing Science in Risk Assessment</i>
May, 2011	AAAS Science Policy Forum, Washington DC	<i>Integrity for Science Policy</i>
July, 2011	OECD Mexico Workshop – New Ideas for Risk Based Regulation and Regulatory Governance in Mexico, Mexico City, Mexico	<i>Science for Risk-Based Regulation</i>
September, 2011	AAAS Hill Science Briefing, Washington DC	<i>Thinking about Risk</i>
November, 2011	AIHA/PCIH Risk Assessment Symposium, Baltimore MD	<i>Cumulative/Aggregate Risk: How it relates to IH</i>

GOVERNMENT TESTIMONY (Not Related to Government Service)

- Testimony before Joint Hearing of the U.S. House of Representatives Committee on Government Reform and Agriculture Committee on USDA BSE Surveillance (July, 2004)
- Testimony before U.S. House of Representatives, House Committee on Resources, Subcommittee on Energy and Mineral Resources in hearing on impact of science on public policy (February, 2004)
- Testified before U.S. House of Representatives Committee on Government Reform Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs on H.R. 2138 bill elevating EPA to cabinet status (June, 2003)
- Testified before U.S. House of Representatives Committee on Agriculture, Subcommittee on Department Operations, Oversight, Nutrition and Forestry on implementation of the Food Quality Protection Act of 1996 (August, 1999)
- Testified before U.S. House of Representatives Committee on Science, Subcommittee on Energy and Environment on “The Science of Risk Assessment: Implications for Federal Regulation” (July, 1998)
- Testified before U.S. House of Representatives Committee on Small Business on the use of sound science and risk analysis in federal agency regulations (April, 1997)
- Testified before U.S. House of Representatives Committee on Commerce, Subcommittee on Health and Environment on H.R. 1627, the Food Quality Protection Act of 1995 (June, 1995)
- Extensive testimony in Massachusetts on legislation related to risk assessment, risk management, and risk communication (1995-2003)

PROFESSIONAL SERVICE

- Food and Drug Administration, Center for Food Safety and Applied Nutrition (CFSAN) Food Advisory Committee (2010-date)
- Cyprus International Institute for Environmental and Public Health Science Advisory Board (2010-date)
- University of Michigan Risk Science Center External Advisory Board (2010-date)
- Society for Risk Analysis – Councilor, President-Elect (2011-2012)
- Health and Environmental Sciences Institute – Emerging Issues Committee, Sustainable Alternatives Subcommittee
- National Science and Technology Council, Committee on Environment and Natural Resources (Co-Chair) (2005-2009)
- National Science and Technology Council, Committee on Science (2005-2009)
- National Science and Technology Council, Committee on Homeland and National Security (2005-2009)
- National Nanotechnology Environmental Health Initiative (Co-Chair) (2007-2009)
- National Academy of Sciences/Institute of Medicine - *Committee to Review the WIC Food Packages*
- Department of Health and Human Services/National Institute for Environmental Health Sciences National Advisory Environmental Health Science Council
- Society of Toxicology – Risk Assessment Task Force, Communications Committee (Chair 2011-2012), Congressional Task Force, TSCA Task Force
- International Food Information Council Foundation – Board of Trustees
- American Water Works Association Research Foundation – Project Advisory Committee (Quantifying Health Risk Reduction Benefits)
- Environmental Literacy Council – Executive Committee
- Public Health Service *Ad Hoc* Study Section – Mechanistic Risk Assessment Methods (CDC/NIOSH RFP)
- Editorial Board – Human and Ecological Risk Assessment
- Editorial Board – Journal of Risk Research
- Guest Editor – Human and Ecological Risk Assessment Special Issue “Probabilistic Methods in Risk Assessment”
- Peer Reviewer – Toxicological Sciences, Risk Analysis, Environmental Health Perspectives, Environmental Science & Technology, Journal of the Air and Waste Management Association, Journal of Risk Research, Risk: Health, Safety and Environment, Journal of Policy Analysis and Management, Toxicology and Industrial Health, Dose-Response: an International Journal, Critical Reviews in Toxicology, American Journal of Public Health, numerous EPA, FDA, USDA and CA EPA documents.
- Foundation for Research on Economics and the Environment (FREE) Seminars on Environmental Policy, Science, and Risk Analysis for Federal Judges (1996, 1997, 1998, 2000, 2001, 2002, 2003) and FREE Board

- Society for Risk Analysis Continuing Education Workshop - Biologically-Based Dose Response Workshop (1997)
- Society of Toxicology Continuing Education Course - Overview of Uncertainty Analysis (1998); Risk Communication (2000)

GWU SERVICE

- Faculty Senate - Committee on Academic Freedom and Ethics (Chair)
- Faculty Senate – Committee on Public Health and Health Services Student Evaluation
- Director Environmental and Occupational Health DrPH Program
- Strategic Planning Working Group on Executive Education
- Strategic Planning Working Group on Doctoral Education
- Faculty Search Committee – Department of Environmental and Occupational Health
- Chair Search – Department of Prevention and Community Health
- George Washington University Colonials Weekend - *Classes from GW's Best*