

SERVICE

ADVISORSHIPS:

National Academy of Science (USA), National Institutes of Medicine and Natural Research Council Panels:

- 1) Committee on Hormone-Related Toxicants in the Environment: 1997-1999
- 2) Committee on Risk-Based Criteria for Non-RCRA Hazardous Waste: 1998-1999
- 3) Committee on Vietnam Agent Orange Research Interests and Priorities: 1998-1999
- 4) Committee on Assessment of Risks from Remediation of PCB-Contaminated Sediments:
1999-2001
- 5) Committee on Bioavailability of Pollutants from Soils and Sediments: 2000-2002
- 6) Committee on Strengthening Science-based Decision-making on Persistent Organic Pollutants (POPs) in China: 2003-2004. *Chairperson*

Institute of Medicine (USA) Advisorships:

- 1) Testimony to Committee on Making the Best Use of the Agent Orange Reconstruction Model. 2007

National Institutes of Health (USA) Advisorships:

- 1) National Toxicology Program (NTP) Board of Scientific Councilors (BOSC), National Institutes of Environmental Health Sciences (NIEHS), of the National Institutes of Health (NIH): 2003-2006
- 2) NTP, NIEHS Technical Subcommittee, 2003-2009.

US Environmental Protection Agency (USA) Advisorships:

- 1) Board of Scientific Counselors (BOSC) Executive Committee for Office of Research & Development: 2004-2009
 - Nomination Committee, 2005
 - Committee on Risk Assessment Workshop, US EPA/US NAS, 2004-2005
 - Chair, Subcommittee to Review Program in Sustainability, ORD
 - Chair, Subcommittee for Midcycle Review of Program in Sustainability, 2008

- 2) Science Advisory Board (SAB) Chartered member of the Executive Committee, 2008-2011.
 - Member Standing Committee on EPA Science and Technology Awards Committee, 2008, 2009, 2010
 - Member Subcommittee on “Science for Decisions”, 2008, 2008, 2009
- 3) “Assessment of Potential Effects of the Herbicide Atrazine to Amphibians.” With K.R. Solomon, J.A. Carr, L.H. DuPreez, R.J. Kendall, E.E. Smith, and G.J. van der Kraak, August 5, 2003, Washington, D.C.
- 4) “Assessment of Potential Effects of the Herbicide Atrazine to Amphibians.” With K.S. Solomon, J.A. Carr, L.H. DuPreez, R.J. Kendall, E.E. Smith, and G.J. van der Kraak, October 9, 2007, Washington, D.C.
- 5) “Tier II Scientific Assessment of Toxicity and Risks of Flowable Formulations of Carbofuran to Birds” With Lou Best, Larry Brewer, Dwayne Moore, and Keith Solomon. February 5, 2008, Washington, D.C.

Environment Canada Advisorships:

- 1) Briefing to Deputy Ministers “Monitoring of Contaminants in the Environment: Perfluorinated Compounds—A Case History. 2006.
- 2) Advised the research division of Environment Canada on the 25-year strategic plan.

World Health Organization Advisorships:

- 1) Development of Toxic Equivalency Factors of polychlorinated dibenzo-*p*-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) for fish, birds and mammals: 1996-1999.
- 2) Global Assessment of the State-of-the-Science of Endocrine Disruptors. United Nations Environment WHO Program and International Programme on Chemical Safety: 1998-2000.

United Nations Advisorships:

- 1) Scientific Technical and Advisory Panel (STAP) Roster of Experts (Persistent Organic Pollutants). 2003

International Advisorships:

- 1) Scientific Advisory Panel of the Environment Agency, United Kingdom. 2004-2007.
- 2) Network on Environmental Risk Assessment and Management, Australian Research Council, 2004-2008.

PROFESSIONAL ORGANIZATIONS:

Offices, Committees, Session Chairs and Meetings:

- * **American Association for the Advancement of Science:** 1981-present
- * **American Chemical Society** (Environmental Chemistry Division): 1976-1980, 1989-Present
 - (1) Environmental Improvement Committee, 1993-Present
 - (2) Organizer of Annual symposium for Division of Agrochemicals, Orlando, FL, April 7- 11, 2002.
- * **American College of Toxicology:** 1990-93
- * **American Fisheries Society:** 1970-1976, 1988
- * **American Fisheries Society - Michigan Chapter:** 1984-2006
- * **American Institute of Biological Sciences:** 1978-2006
- * **American Institute of Fisheries Research Biologist:** 1982-2006
- * **American Society of Limnology and Oceanography:** 1970-1999
 - Program Committee. 39th Annual Meeting: 1976
 - Session Chairman, "Freshwater Phytoplankton," 39th Annual Meeting, Savannah, Georgia: 1976
- * **American Society for Testing Materials (Section E.47):** 1975-1997
 - Session Chairman "Comparison of Single and Multi-species Toxicity Testing". 14th Symposium
 - on Aquatic Toxicity and Hazard Assessment. San Diego, CA., April: 1990
- * **The Association for Canadian Studies in the United States (ACSUS):** Review of proposals. 2003
- * **Aquatic Toxicology Workshop:**
 - Annual meeting, Saskatoon, Saskatchewan, 2008
 - Organizing Committee

Scientific Program Committee

Special Symposium organizer

Chair of Sponsorship committee

- * **Association of Southeastern Biologists:** 1976-1981
- * **Beta Beta Beta, Alma College Chapter:** 1967-1970
 - **President: 1969-1970**
 - Frank Brooks Award: 1970
- * **Central Great Lakes Regional Chapter, Society of Environmental Toxicology and Chemistry:** 1984-2006
 - *Ad Hoc* Committee to start chapter; wrote bylaws and incorporated chapter
 - Charter Member
 - **President: 1984**
 - Secretary/Treasurer: 1986-1989
- * **Council of Scientific Society of Presidents:** 1990-1991
- * **Ecological Society of America:** 1970-1985
 - Publications Committee
- * **Federation of American Scientists for Experimental Biology:**
- * **Georgia Fisheries Workers:** 1977-1980
- * **Great Lakes United:** 1985-2000
- * **Institute of Ecology, University of Georgia:** 1974-1981
- * **International Association of Geochemistry and Cosmochemistry: Working Group on Natural Waters Protection from Pollution:** 1976-Present
- * **International Association for Ecology:** 1974-1978
- * **International Association for Great Lakes Research:** 1982-1997
 - Board of Directors: 1992-1995

- Chairperson, Annual Meeting Committee: 1993-1996
- Co-Chairperson, Annual Meeting, E. Lansing, MI: 1995
- Session chairperson, "Biological Effects of Micro-contaminants". 28th Conference on Great Lakes Research, Milwaukee, WI: 1985
- Session chairperson, Physiological and Biochemical Biomonitoring and Biomarkers",
- 37th Annual meeting, Windsor, Ontario: 1994
- Co-program Chairperson of Annual meeting, East Lansing, May 28-June 1, 1995.

* **International Association for Sediment Water Science:** 1990-Present

- Board of Directors: 1992-1995
- Chairperson, Meetings Committee: 1993-1996
- Fellowship Committee: 1993-1996
- Session Chair, Bioavailability and Toxicity
- Session Chair, Interactions Between Organisms and Sediment. The Interactions Between Sediments and Water. 5th International Symposium. Uppsala, Sweden: August, 6-9, 1990

* **International Association for Water Research:** 1974-1990

* **International Association on Water Quality:** 1990-Present

* **International Water Association:** 1999-Present

- Specialist Group on Hazard Assessment and Control of Environmental Contaminants
- Board of Directors, 2000-2002
- Program Committee, 3rd annual water Congress, Melbourne, Australia, April 7-12, 2002

* **International Humic Substances Society:** 1982-1999

* **International Phycological Society:** 1972-1976

* **International Society for the Study of Xenobiotics:** 1981-Present

- * **International Society for Ecotoxicology and Environmental Safety (SECOTOX):** 1985-Present
 - Board of Directors: 2005-2008
 - Scientific Organizing Committee, World SECOTOX Conference, September 5-7, 2005, Brno, Czech Republic.
 - International Scientific Committee, International Conference on Ecotoxicology-2006: Trends and Perspectives, September 17-20, 2006, Wisla, Poland

- * **International Society of Theoretical and Applied Limnology:** 1972-1997
 - Co-convener "Ecotoxicology" 23rd Congress Hamilton, NZ: February 1987
 - Editorial Board 23rd Congress: 1987
 - Workshop on simulating light for Limnological Studies, Hamilton, NZ: February, 1987
 - Co-organizer Workshop on Ecotoxicology, 24th Congress; Munich, Germany: August, 1989.
 - Session Chair: "Fish", 24th Congress; Munich, Germany: August, 1989
 - Session Chair: "Ecotoxicology", 24th Congress; Munich, Germany, August 1989
 - Session Chair: "Biomarkers in ecotoxicology - Wildlife, 13th Annual Meeting, Cincinnati, Ohio, 1992
 - Session Chair: "Great Lakes Region Toxicology" 13th Annual Meeting, Cincinnati, Ohio: 1992

- * **International Statistical Ecology Program:** 1982-Present
- * **International Water Association:** 1999-Present
 - Board of Directors: 2000-2003
- * **Michigan Academy of Science Arts and Letters:** 1969-1974; 1987-2006
- * **Midwest Pollution Control Biologists:** 1988-2006
- * **North American Benthological Society:** 1971-1974; 1980-1981
- * **Phycological Society of America:** 1979-1981
- * **Society for Environmental Geochemistry and Health:** 1979-1990

- * **Sigma Xi-Michigan State University Chapter:** 1974-2006
 - **President: 1993-1994**
 - Vice President: 1992-1993
 - Nominations Committee: 1990-1993
- * **Society for Environmental Geochemistry and Health:** 1981-Present
- * **Society of Environmental Toxicology and Chemistry (SETAC):** 1979-Present
 - Charter Member: (1979)
 - **President: 1990-1991**
 - Vice President: 1989
 - Executive Director Evaluation Committee: 1992, Chairperson
 - Board of Directors: 1986-1992
 - Executive Committee: 1988-1992
 - Associate Editor for Special Publications (Biology), 1988-1990
 - Technical Committee: 1984-1987
 - Regional Chapters Committee: 1984-1985
 - Awards Committee: 1985-1987
 - Program Committee: 1982
 - Meetings Committee: 1990-1993
 - Nominations Committee: 1992, Chairperson
 - Historian: 1992-1996
 - Proctor and Gamble Student Fellowship Award Committee: 1985-1987
 - Editorial Board, Environmental Toxicology: 1988-1989
 - Long-range Planning Committee Chairperson: 1990
 - Chairperson, Ad hoc Committee for Institution Subscriptions: 1985-1986

- Chairperson, Ad hoc Committee for European Regional Chapters: 1986-1987
- Past Presidents Council: 1992-Present. Chairperson 1992-1993
- Liaison to American Chemical Society, Committee on Environmental Quality: 1993-Present
- Ad hoc Committee to Develop Better SETAC-Government Liaison. Subcommittee of Technical Committee: 1986-1987 Chairperson
- Session Chairperson, 3rd Annual Meeting, Washington, D. C., November: 1982
- Session Chairperson, "Pharmacokinetics" 6th Annual Meeting, November, St Louis, MO: 1985
- Instructor, Pre-conference Workshop on Pharmacokinetics, 6th Annual Meeting, St. Louis, MO: November, 1985
- Participant "Strategic Planning Meeting", Gulf Breeze, FL: Jan., 1989
- Session Chairperson, "Co-Planar PCBs" 10th Annual Meeting, Toronto, Canada: 1989
- Session Chairperson, "Toxicant-related Issues in the Great Lakes Region", 13th Annual Meeting, Cincinnati, Ohio: November, 1992
- Session Chairperson, "Biomarkers of the Effects of Toxicants on Wildlife", 13th Annual Meeting, Cincinnati, Ohio: November, 1992
- Session Chairperson, "Biosensors", 20th Annual Meeting, Philadelphia, PA, November, 1999
- Member panel on "Support of Science-Based Decisions Concerning the Evaluation of Toxicity of Mixtures"
- Session Chair "Perfluorinated Chemicals, 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland

* **SETAC-Europe.**

- Liaison from SETAC to start SETAC-Europe: 1987-1990
- Scientific committee for World Congress Lisbon, Portugal: 1993
- Annual meeting, June 21-28, Potsdam, Germany:1992

- Session Chair: Marine Pollution Issues First World Congress, Lisbon, Portugal: 1993 Session Chair: Status & Trends of Bird Populations: The roles of contaminants. 5th Annual meeting, June 25-28, 1994, Copenhagen
- Scientific Program Committee, 5th Annual meeting, June 25-28, 1994, Copenhagen
- Session Chair: Biotransformation. 7th Annual meeting, April 6-10, 1997, Amsterdam, The Netherlands
- Session Chair: “Biosensors for Environmental Monitoring”, 8th annual meeting, April 14-18, 1998, Bordeaux, France.

* **SETAC-Europe, Russian Division**

- Session Chair: “Oil and Gas Exploration and Production: Environmental Considerations and Technological Developments”. 1st Annual meeting, June 14-17, 1998, Saint Petersburg, Russia.

* **SETAC-Pacific Rim**

- Annual Meeting Organizing Committee, Beijing, 2006
- Annual Meeting Organizing Committee, Guanzhou, 2010

* **SETAC Foundation for Environmental Education.**

- Board of Directors: 1992-Present
- Chairman of the Board of Directors: 1992-1993
- Vice President of Board of Directors: 1994-1995
- President of Board of Directors: 1994-1995
- Vice President of Board of Directors: 1996-1999

* **Society of Toxicology; Michigan Regional Chapter: 1984-2006.**

* **Water Pollution Control Federation: 1970-1997.**

ADDITIONAL PROFESSIONAL ACTIVITIES:

- * Oak Ridge Associated Universities Traveling Lecture Program, 1974-1980.
- * Symposium Chairman; "Microcosms in Ecological Research," November 8-10, 1978.
- * Section Coordinator; Review of "Quality Criteria for Water-EPA," for American Fisheries Society, 1978.
- * Session Chairman, "Energy and Environmental Stress in Aquatic Systems: Modeling Stresses and Heavy Metal Stresses," 1978.
- * Instructor - Oak Ridge Associated Universities, "Heavy Metals in the Environment," 1978.
- * Session Chairman, "Environmental Chemistry and Cycling Processes: Elemental Cycling in Aquatic Ecosystems," 1976.
- * Session Chairman, "Thermal Ecology Symposium," April 2-5, 1975, Augusta, Georgia.
- * Great Lakes Fish Commission, Board of Technical Experts Advisory Panel on Fish Habitat - Toxic Substances. 1982-1985.
- * Scientific support coordination for oil and hazardous materials spills; NOAA, 1983-Present.
- * Great Lakes Regional Seminar Committee for International Joint Commission: 1983-Present.
- * Michigan Environmental Science Board. Advisor to Governor's office on environmental policy issues
- * Michigan Governor's Conference on Toxic Substances in the Great Lakes Region, 1983-1984.
 - Program Committee.
 - Organizing Committee.
- * Michigan State Needs for National Acid Deposition Program: 1983.
 - One of two representatives from Michigan to the national program.
- * Scientist's Institute for Public Information, Media Resource Service. Makes scientific information available to journalists. 1983-Present.

- * Instructor. Great Lakes Waters, Short Course for College Teachers: Michigan State University Continuing Education Program, December 4-6, 1983.
- * Dioxins in the Environment Workshop: Michigan State University, Center for Environmental Toxicology, December 6-7, 1983, East Lansing.
- * Delegate, participant in subsection on fate and Distribution of Dioxins in the Environment.
- * NIH; Special Study Section, Natural products chemistry, July 1984.
- * External Reviewer, Monsanto Company, Research program in "Biochemical Indicators of Stress in Aquatic Organisms," November 16, 1984, St. Louis.
- * Freshwater Society National Environmental Health Network. Bush Foundation - Resource Person, 1984-Present.
- * Michigan Critical Materials Register Advisory Committee, 1985-Present.
- * Michigan Sea Grant College Program, Visiting Lecturer, Program - Toxic Substances in the Great Lakes, 1985-86.
- * U.S. Environmental Protection Agency Expert Resources Inventory System (ERIS). Identifies expert consultants and expert witnesses for hazardous waste enforcement cases, 1984-Present.
- * International Joint Commission.
- * "Areas of Concern." Presentation to Commission on Bioassay Techniques. November 4, 1985, Detroit, Michigan.
- * Objectives Evaluation Subcommittee of Programs Committee: Water Quality Board. 1988-1993.
- * National Sea Grant Program, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Site Review of Illinois/Indiana Program, January 26-28, 1987, Illinois.
- * University of Windsor, Great Lakes Institute.
- * National Oceanic and Atmospheric Administration, U. S. Department of Commerce. Steering Committee for Toxic Substances Research. October 22, 1986, Madison, Wisconsin.
- * Fulbright Central Selection Committee, Bonn, West Germany, October 14-16, 1987.
- * Ecological Information Network. Ecological Society of America program to provide expertise to United States Congress and other Groups. 1988-Present.

- * U.S. Soviet Science exchange program. Host of visit of delegation from Scientific Secretary of the All Union Scientific Research Institute. November 1988, East Lansing, Michigan.
- * Conference/Workshop on the Status of Knowledge, Critical Research Needs, Legislation and Development of Appropriate Technology for the Michigan Groundwater Quality Challenge, November. 10-11, 1988, East Lansing, Michigan.
- * Indiana Academy of Science, Nov. 1988, Notre Dame, Indiana.
- * "The Sediment Solution: Cleaning up Contaminated Sediment on our Great Lakes and North American Coasts". A binational conference by and for Researchers, Managers and Citizens sponsored by the Great Lakes United, the Lake Michigan Federation, US Environmental Protection Agency and Environment Canada. November 30-December. 3, 1988, Merrillville, Indiana.
- * Michigan Act. 228 Site Review Board. Appointed by governor to serve on nine-member panel to review applications for permits to locate facilities for the treatment, storage, or disposal of hazardous waste. 1989-1990.
- * Toxicity/Chemistry Work Group of Assessment and Remediation of Contaminated Sediments Program established under section 118C of the Water Quality Act of 1987 to organize and oversee a five year demonstration program for the removal of toxic substances from the bottom sediments of the Great Lakes. US Environmental Protection Agency Great Lakes National Program Office. 1988-Present
- * International Joint Commission/Council of Great Lakes Research Managers. Workshop on Cause-Effect Linkages, March 28-19, 1989, Chicago, Illinois.
- * Great Lakes Contaminants Information Exchange Program. 1989-.
- * Objectives Evaluation Subcommittee of the Great Lakes Water Quality Board. The purpose of this committee is to develop criteria and methods for evaluating the impact of contaminants in the Great Lakes and to monitor progress of the US and Canadian Governments. 1989-1993.
- * Michigan Public Health Policy Institute. 1989-Present.
- * Cooperative Institute for Limnology and Ecosystems Research: Fellow, 1989-Present.
- * International Symposium on Aquatic Ecosystem Health, Waterloo, Ontario, Canada, July 23-26, 1990. Organizing Committee.
- * Michigan Earth Day – Lansing, Michigan *Invited* speaker at teach in "Trends in contaminants in the Great Lakes". April, 1990.

- * Clemson University Institute of Wildlife and Environmental Toxicology. External Advisory Board. 1990-Present. Chairperson, 1992-1993, 1996-1999.
- * Chairperson, External Review Panel. University of California Davis Ecotoxicology Program 1993.
- * International Joint Commission. Round Table on Contaminant-Caused Reproductive Problems in Salmonids. Windsor, Ontario, September, 1990. *Invited Delegate*.
- * Michigan Council on Environmental Quality, Science Advisory Board. 1990-Present.
- * Canadian National Water Research Institute, Canadian Center for Inland Waters, Burlington, Ontario. "A Proposed Strategy for the Department of Biological Sediment Criteria". *Invited Delegate*. January 22-24, 1991.
- * US-EPA. Sediment Quality Criteria Workgroup. 1992-Present.
- * Testimony before staff of US House of Representatives. Discussion of control of estrogenic compounds in the environment. March 10, 1994, Washington, D.C.
- * Estrogenic compounds in the Environment. A workshop sponsored by the Chemical Manufacturer's Association. May, 1994, Washington, D.C. *Invited Delegate*
- * Program Reviewer, Tel Aviv University, 1994
- * Program Reviewer, Ecotoxicology Program, University of California at Davis, 1994
- * US EPA Environmental Research Laboratory-Cincinnati, OH. Program Reviewer, Biomarkers

Chairperson

- * **US Dept. Agriculture, Water Resources Assessment and Protection Program.** Reviewer grant proposals. Annually, 1991-1998
- * Saginaw Bay National Watershed Initiative, Bioconcentrated Chemicals in the Environment, Technical Steering Committee. 1994-1997.
- * Research Institute of Toxicology (RITOX), University of Utrecht, The Netherlands: Expert Advisory Panel (*Chairperson*). 1994
- * External examiner for Drs. A.T.C. Bosvelt, Research Institute of Toxicology (RITOX), University of Utrecht, The Netherlands. 1995.
- * National Academy of Science/ National Research Council: Committee on Hormone-Related Toxicants in the Environment. 1995-1997.

- * External Reviewer for Pim Leonards Ph.D. Dissertation Committee, Department of Biology, Free University of Amsterdam. 1997.
- * External reviewer of dissertation project proposal, WIMEK Institute, Wageningen, The Netherlands. 1998
- * External reviewer for promotion and tenure. Telaviv University, Telaviv, Israel. 1998
- * Opponent for Dissertation Defense of Helena Olsman, University of Örebro November 25, 2005, Örebro Sweden.
- * Organizing committee for the 4th International Symposium on Persistent Substances. November 18-21, 2007, Beijing, China. Chinese National Science Foundation.
- * Organizing committee for the 12th International Beijing Conference and Exhibition on Instrumental Analyses, October 18-21, 2007, Beijing China.
- * Organizing committee for the Ecosummit-Beijing on Ecological Risk Assessment and Management of Persistent Toxic and Hazardous Pollutants. May 22-27, 2007, Beijing China.
- * Interview, Canadian Broadcasting Radio. Topic: Endocrine Disruptors and fish. August 4, 2010.

COMMUNITY SERVICE ACTIVITIES:

*** Alma College:**

(1) Career Consultant: 1982-1994.

(2) Arlan L. Edgar Endowment Fund Committee: 1986-1989.

(3) Alumni Board of Directors: 1988-1993.

 President-Elect: 1994-1995

 President: 1995-1996

(4) Board of Directors: 1993-1998

*** Boy Scouts of America.**

- Eagle Scout, 1963.

- Alpha Phi Omega Fraternity, 1967-1970.

- Merit Badge Counsellor: 1983-Present.

- Bird Study
- Chemistry
- Fish and Wildlife Management
- Nature
- Environmental Science

* **Ducks Unlimited**

- Red Cedar Chapter, East Lansing, MI, 1982-Present.
- Annual Banquet Committee.
- Chairperson of Speaker Committee
- Sponsor: 1998, 1999, 2000, 2001, 2002, 2003

* **Williamston, Michigan Community Schools**

- Science Day, March, 1990.
- Band Parents, 1989-1998

* **Williamston Township**

- Strategic Planning Committee for Development Plan. 1990-1991.

ACADEMIC COMMITTEES AND DUTIES:

Savannah River Ecology Laboratory

- * Radiation Safety Committee: 1974-1981.
- * Laboratory Safety Committee: 1974-1981.
- * Seminar Committee (Chairman): 1979.
- * National Research Park Committee: 1979-1980.

Michigan State University

- * Bio-safety Committee (recombinant DNA Research): 1994-
- * Management Committee, University containment facility: 1994-
- * University Hearing Board: 2003-2006

- * Steering Committee for Review of PhD. Program in Environmental Toxicology, 2002
- * Faculty Council, 2004-2006
- * Academic Council, 2005-2006
- * University Committee on Faculty Tenure (2006)
- * University Committee on Academic Governance (2006-2009)

Zoology

- * Ad Hoc Planning Committee: 1998
- * Chair, Search committee “Environmental Scientist”: 1998-1999
- * Steering Committee for Review of PhD. Program in Environmental Toxicology
- * Graduate Committee: 1999-2002
- * Chair Graduate Committee, 2002

Fisheries and Wildlife

- * Faculty Secretary: 1980-1984.
- * *Ad hoc* Committee on Graduate Curriculum: 1981.
- * *Ad hoc* Committee on Recruitment (Chairman): 1982.
- * *Ad hoc* Committee on Departmental Review: 1982.
- * Undergraduate Curriculum: 1982-Present.
- * *Ad hoc* Committee on Fisheries and Wildlife Alumni Association (Chairman: 1982-1985).
- * Limnology Program Planning Committee: 1987.
- * Natural Resources Curriculum Committee: 1987-1992.
- * Graduate Committee: 1992-1997.

Pesticide Research Center

- * Safety Committee (Chairman): 1982-1987.
- * Research Committee (Chairman): 1984-1987.

- * *Ad hoc* External Review Committee (Chairman): 1984-1985.

Center for Environmental Toxicology

- * Functional Advisory Board: 1981-Present.
- * Undergraduate Curriculum Committee 1981-Present.
- * Graduate Curriculum committee: 1981-Present.
- * Postdoctoral Certification Committee: 1981-Present.
- * Food Toxicology Advisory Committee, FDA and USDA: 1984-1987.
- * "Dioxins in the Environment" Program Committee, 1983-1984.

Agricultural Experiment Station

- * Review Committee for Toxicology Research Support: annually, 1981-1986.

Ecology and Evolutionary Biology Faculty

- * Curriculum Committee, 1984-1993.

Michigan Public Health Policy Institute

- * Task Force for Formation. 1989-1993.

Environmental Sciences Program

- * Coordinating Committee. 1990-Present.
- * MSU Ambassador to Hong Kong. 2007-Present
- * MSU Ambassador to Saskatchewan. 2007-Present

University of Saskatchewan

Toxicology Centre

- * Chair of Aquatics Facility Management Committee. 2006-Present

University Central Administration

- * Committee on Research Collaboration and Success, 2008-Present
- * Dean's Designate/Chair for Ph.D Defence, Chemistry, 2008

CONSULTANTSHIPS:

- * **Academy of Finland, Research Council for Biosciences and Environment:** Helsinki, Finland
 - (1) External proposal reviewer, 2004
- * **Alabama Attorney General:** Montgomery, AL 1994
 - (1) Review of sediment toxicity information from Dye plant
- * **Alkyl Phenol Ethoxylates Research Council:** Washington, D.C.
 - (1) Development of long-range strategic study plan for ecological risk assessments of Alkylphenol ethoxylates and their degradation products.
 - (2) Field studies of concentrations of APEOs and their degradation products in surface water, sediments and fish tissues.
- * **American Forest and Paper Association:** 2000
 - (1) Ecological risk assessment of polychlorinated dioxins in fishes in rivers of Maine to bald eagles.
 - (2) Development of a bald eagle restoration plan for the State of Maine
- * **BASF Corporation:** Ludwigshafen, West Germany.
 - (1) Assisted in selecting and implementing environmental fate models to study the probable fate of products. 1988.
- * **Belgian Prime Minister; Science Policy Office - National Impulse Program in Marine Sciences:** Brussels Belgium. 1991.
 - (1) Review of program and research proposals on science and economics research on the North Sea.
- * **Brown and Caldwell, Inc.** Maui, Hawaii
 - (1) Analysis of Industrial Chemicals in Waste Waters from Honolulu”
- * **Camp, Dresser and McKee:** Detroit, Michigan
 - (1) Natural resource damage assessment for effects of PCBs and dioxins in Saginaw Bay, Michigan
- * **Canadian Foundation for Innovation**
 - (1) Expert Committee to review proposals in the area of Bioproducts, 2008

- * **Canadian Government Chemical Management Plan**
 - (1) Review of proposals (2008)
- * **Canadian Government Minister of Environment**
 - (1) Chairman, Board of Review for Decamethylcyclopentasiloxane (D5) (2010-2011)
- * **Canada Research Chairs program: Ottawa, Canada**
 - (1) External reviewer of chair application to University of Guelph, 2005
 - (2) External reviewer of chair application to University of Waterloo, 2005
- * **Canadian Network of Toxicology Centres: Guelph, Ontario.**
 - (1) Board of directors. 1991-Present.
 - (2) External audit of programs-member of audit team
- * **Cantox corp: Mississauga, Ontario, Canada.**
 - (1) Expert panel for Project for Chlorine Institute on chlorinated hydrocarbons in the environment. 1992.
 - (2) Reviewer- Scientific principles for evaluating the potential for adverse effects from chlorinated organic chemicals in the environment. 1995
 - (3) Member of Expert Panel for the review of the Human and Ecological Risk Assessment of the Herbicide *Roundup* (Glyphosate). 1998
- * **CBR-Canada: Sidney B.C. Canada.**
 - (1) Review of sediment quality guidelines for polycyclic aromatic hydrocarbons. 1991.
- * **Cumulative Environmental Management Association (CEMA): For MacMurry, Alberta**
 - (1) Review: *Guideline for Wetland Establishment in the Oil Sands Region, 2007 Edition.* 2010
 - (2) Review: *Appendices to the Guideline for Wetland Establishment in the Oil Sands Leases, Revised (2007) Edition.* 2010
- * **CH2MHill, Minneapolis, MN**

(1) See CEMA, 2010

* **Chemical Manufacturer's Association:** Washington, D.C.

(1) Briefings on chlorinated hydrocarbons in the environment to CMA Council. 1991

(2) Briefings to congressional staffers on the senate and house sides. Issues: Chlorinated hydrocarbons, especially xeno-estrogens in the environment. Re-authorization of the *Clean Water Act*.

* **Chlorine Chemistry Council:** Washington, D.C., 2001

(1) Review of Research foundation for Health and Environmental Effects Science Research Plan for 2001-2006.

* **Chlorine Institute.** Washington, D.C.

(1) Preparation of position papers on the sources, fates and effects of chlorinated compounds in the environment. The 1900 page document covers 9 product categories and over 90 compounds. 1992-1994

* **City of Columbus, Ohio Water Works:** 1979.

* **City University of Hong Kong, Co-operative Education Center, Faculty of Science and Engineering, 2005-Present**

(1) Student mentor for environmental sciences

(2) Pilot study to reduce halomethane precursors in feed water by ultrafiltration.

* **Clemson University- The Institute of Wildlife and Environmental Toxicology (TIWET):**

(1) External Advisory Board. 1991-1994. 1996-1997; Co-chairperson 1993-1994.

(2) Consultant to hire a new director for TIWET

* **Commerce Township, Michigan**

(1) Assessment of Potential Toxicity of Ammonia to the redsided dace in Michigan Waters. A risk assessment conducted for Commerce Township, Michigan, 2005

- * **Consumer Power Company:** Jackson, MI.
 - (1) Review of potential hazards due to coal ash stored at Woodtick Point, Ohio and use of material in constructing a sea wall in Lake Erie. 1989.
 - (2) Assessment of the risk of Arsenic and Selenium migrating off site at an ash disposal basins at the Campbell plant near Grand Haven Michigan.
 - (3) Assessment of the potential risks of dam removal on rivers in Michigan. Residues in fish and sediments were measured and a risk assessment conducted.

- * **State of Delaware, Attorney General's Office:**
 - (1) "Marine Sediment Contamination by Coal." 1984.

- * **Dow-Corning, Corp.** Midland, Michigan
 - (1) Science advisory group (SAG) for silicones in the environment Jointly with Procter & Gamble Co. 1991.
 - (2) Reassessment of silicones in the environment. 1994.
 - (3) External promotion reviewer, 2004

- * **DowAgrosciences, Inc.:** Indianapolis, IN
 - (1) Ecological Risk Assessments of chlorpyrifos in surface waters , 1998
 - (2) Comments to US EPA on their ecological risk assessment for chlorpyrifos.

- * **EarthWatch Institute: Maynard, MA**
 - (1) Member of Speaker Bureau, 2002-

- * **East Lansing, Waste Water Treatment Plant:**
 - (1) Bioassay for waste water permitting.

- East Michigan Environmental Action Council:** Birmingham, Michigan.
 - (1) Revision of Hazardous Waste Siting Response Handbook. 1989-1990.

- * **ECETOC, Brussels, Belgium**
 - (1) Briefing on Estrogenic Compounds in the Environment, 1994

- * **ENTRIX, Inc.**, Houston, TX:
 - (1) Senior Consultant, 1995-Present
- * **Environment Agency of England and Wales:** Wallingford, England, UK
 - (1) External reviewer Environment Agency Science on Endocrine Disruptors, 2004
- * **Environment Canada: Canadian Center for Inland Waters**, Burlington, Ont., Canada.
 - (1) "Workshop on developing biological sediment criteria". 1991.
 - (2) Intergovernmental Aquatic Toxicology Group. 1990.
 - (3) Subcommittee Review of "Environment Canada Sediment Guideline". 1992
- * **Environment Canada:**
 - (1) Review of Draft Technical Document for the Canadian Environmental Screening Assessment of Perfluorooctane Sulfonate (PFOS) and Its Precursors Under the Authority of the Canadian Environmental Protection Act. (CEPA 1999). 2003
- * **Environment Canada: Great Lakes University Research Council.**
 - (1) Review of research proposals. 1991.
 - (2) Technical subcommittee to review "Guidelines on collection, storage, manipulation of whole sediment, pore water, elutriates and solvent extracts of sediments for toxicity testing and chemical characterization". 1992-
- * **Environmental Policy Center Law Companies Environmental Group:**
 - (1) Review of Risk Dialogue Group Documents.
- * **European Commission, Directorate General-12**, Brussels, Belgium
 - (1) Joint EU/US Endocrine Disruptor Expert Panel on Research Directions, 1999
- * **External Advisory Council - Institute of Wildlife and Environmental Toxicology, Clemson, University:** 1990-1993.
- * **Florida Department of Environmental Protection:** Tallahassee, Florida.

- (1) Task Force on Water Pollution Control. Metals in fish effects on fish, mercury and cadmium. 1983.
- (2) Assessment of Potential Toxicity of Ammonia to the reidsided dace in Michigan Waters. A risk assessment conducted for Commerce Township, Michigan, 2005

* **Greely and Hanson Inc:** Chicago, Illinois; 1983.

- (1) Assessment of the use of "Microtox^R" as a rapid screening tool for acute toxicity studies.

* **Griffith University:**

- (1) External Reviewer of Ph.D. Dissertation

* **Hercules, Inc.,** Wilmington, DE

- (1) Assessment of risks of dioxins to wildlife, Bayou Meto, Vertac Site, Jacksonville, Arkansas, 1999-2000
- (2) Ecological risk assessments of perfluorinated compounds, for registration. 2000-201

* **Hoechst-Roussel Agri-Vet Company: Sommerville, NJ.**

- (1) Review of testing protocols for agricultural chemical ecotoxicology. 1986-1990.
- (2) General consultant on agricultural chemical ecotoxicology. 1985-1990.

* **Hong Kong Baptist University:** Hong Kong, China

- (1) External examiner for Degree of Doctor of Philosophy, 2004

* **Hong Kong Environmental Protection Department**

- (1) Review and Development of Marine Water Quality Objectives: Fiesibility Study, 2008-2009

* **Hong Kong Research Grants Council:** Hong Kong, China

- (1) Grant Proposal review, 2001

* **Hudson River Foundation:** New York, NY

- (1) Proposal review panel, 1997

* **HydroQual, Inc:** Mahwah, NJ.

- (1) Design of study for registration of Chlorpyrifos for Turf Grass applications. 1987.

* **Idaho Board of Education Specific Research Grant Program**

- (1) Review of research proposals, 1993.

* **Indiana University School of Public and Environmental Affairs:** Bloomington, Indiana

- (1) External reviewer for promotion and tenure, 1997

* **Intelecom, Inc.:** Pasadena, CA

- (1) Preserving the Legacy. A 26 part educational video program on environmental biology, produced for the National Science Foundation. Preparation of materials and on-camera interviews.

* **International Joint Commission:** Windsor, Ontario, Canada.

- (1) Consultation on the use of bald eagles as indicators of ecosystem health. 1990, 1991.
- (2) Consultation on effects of contaminants on reproduction of salmonid fishes of the Great Lakes. 1990.
- (3) Objectives and evaluation subcommittee to set water quality standards. 1987-1991.
- (4) Ecosystem objectives workgroup of binational objectives development committee. 1991-1993.
- (5) Consultation on the effects of contaminants on colonial water birds of the Great Lakes Region. 1992.
- (6) Reviewer of Detroit River Remedial Action Plan, 1991.

* **Irish Research Council for Science, Engineering and technology (IRCSET):** Dublin, Ireland

- (1) External reviewer of grants for the EMBARK Initiative, 2004

* **Italian Institute of Hydrobiology, Italian National Research Counsel:** Pallanza, Italy.

- (1) Sediment toxicity and metal speciation in Lake Orta, which is acidified and contaminated with copper and ammonia.

- * **Kalamazoo River Study Group:** Kalamazoo, Michigan
 - (1) Ecological Risk Assessment of PCBs in Sediments of the Kalamazoo River, Michigan
- * **Kemper Insurance Co.:** See Tressler et al.
- * **Kimberly-Clark, Inc.:**
 - (1) Advisory Group, fates and effect of chlorinated dioxins and similar compounds. 1992-Present.
- * **King Faisal University:** Dammann, Saudi Arabia
 - (1) External advisor and program reviewer, 1992-Present.
- * **Lewis Publishers:** Chelsea, MI. CRC Press, Boca Raton, FL, 1987-Present.
 - (1) Editorial board.
 - (2) Advances in trace substances research.
- * **Life Systems, Inc.,** Cleveland, Ohio: 1979-1992.
 - (1) Periodic review of EPA documents such as reports and standards.
 - (2) Periodic responses to technical questions on fate and effects of trace contaminants in aquatic systems.
- * **Limnotech Inc:** Ann Arbor, Michigan. 1983-1990.
 - (1) Optimization of sampling plan for U.S.E.P.A. Water Quality Monitoring and the Waste load Allocation Program.
 - (2) Litigation land developers vs. Fairfax County, VA. Assessment of Effects of Treatment of Occuqon Reservoir with Copper Sulfate. General waste and runoff water allocation problem.
- * **Maine Pulp and Paper Association:** Portland, Maine, 2001-2002
 - (1) Survey of Dioxins in fish above and below 7 paper mills. Experimental and statistical design and analysis.
- * **MAXUS Energy Corp:** 1991.
 - (1) Sediment monitoring and assessment.
- * **Michigan Council on Environmental Quality:** Lansing, Michigan

(2) Panel to set Environmental Priorities for the State of Michigan, January, 1990.

* **Michigan Department of Agriculture:** Lansing, Michigan

(1) Advisory Working Group on Dioxin, 2002

* **Michigan Department of Natural Resources, Biology Division:** Lansing, Michigan, 1981-Present.

(1) Review of water quality criteria for metals.

(2) Assessment of effluent toxicity at the Anthony Ragnone Waste Water Treatment Plant, 1982. *In situ* acute and chronic fish bioassay. Responses to ammonia and chlorine. Enzyme and substrate analysis, histopathology.

(3) Review of "draft document," Interdepartmental Risk Assessment in Michigan.

(4) Development of surface water quality standard for selenium. 1985.

* **Michigan Department of Natural Resources:**

(1) Review of "Michigan Site Assessment System (MSAS)." A model for priority of sites for remedial action under the Michigan Environmental Response Act (ACT 307)." 1987.

(2) Hazardous Waste Site Review Board. Seven member board to study and make recommendations on the licensing and regulation of generating, transporting, treating, storing or disposal of hazardous materials. Appointment by Governor. 1989-1990.

(3) "Development of a Multi-Media Inventory for Bioaccumulative Compounds of Concern (BCCs) for the Saginaw Bay Watershed", Advisory Committee, 1994-Present.

* **Michigan Department of Public (Community) Health:** Lansing, Michigan

(1) Development of advisories for consumption of fish from the Great Lakes by humans, May 1989-present.

(2) Sampling plan and chemical analyses of samples of Great Lakes fishes, May, 1989.

(3) Review of proposed methods to remove PBBs from contaminated people and livestock, April, 1990.

- (4) Division of Toxicology and Chemistry and Division of Occupational Epidemiology. Delegate to the workshop on development of a biomonitoring program. 2002.
- (5) Biomonitoring Planning Team. Development of list of chemicals of concern for possible monitoring.

* **Michigan Great Lakes Protection Fund:**

- (1) Program Review, 1991.

* **Michigan Legislative Services Bureau Science Office:** Lansing, Michigan

- (1) Herbicide active ingredients. 1984.

* **Michigan United Conservation Clubs:**

- (1) Effects of Contaminants on Furbearers of the Great Lakes Region. Preparation of Study Plan. 1989.

* **Moneco Consultants, Ltd:** Calgary, Alberta, Canada.

- (1) Review of Water Quality Criteria documents. Benzene and Chlorinated Benzenes. 1986-1987.

* **Monsanto Corp (Solutia, Inc.).**

- (1) External Reviewer-Environmental Stewardship programs. 1985
- (2) Member of Expert Panel for the review of the Human and Ecological Risk Assessment of the Herbicide Roundup (Glyphosate). 1998

* **Oak Ridge National Laboratories, Environmental Sciences Division:** Oak Ridge, Tennessee

- (1) External Advisory Board

* **Oxidental Petroleum, Inc.:** 1991.

- (1) Sediment monitoring and assessment.

* **National Wildlife Federation:** Washington, D.C.

- (1) Review of Great Lakes Initiative Plan for control of toxics in the Great Lakes.

* **National Academy of Sciences and National Research Council**

- (1) Committee on Hormone-Related Toxicants in the Environment: 1997-1999

(2) Committee on Risk-Based Criteria for Non-RCRA Hazardous Waste: 1998-1998

(3) Committee on Vietnam Agent Orange Research Interests and Priorities: 1998-1999

* **National Agricultural Chemical Association (NACA):** Washington, D.C.

(1) Development of testing protocols to determine the environmental impact of agricultural chemicals. 1984-Present.

* **National Air and Stream Improvement Institute (NCASI):** Kalamazoo, Michigan.

(1) Briefing on chlorinated dioxins in the environment to officials of pulp and paper industries, Chicago, IL. 1992.

* **National Institutes of Health, National Institute of Environmental Health Sciences, Superfund Basic Research Program**

(1) Review of Superfund Basic Research Program applications, October 4-7, 2004, Research Triangle Park, NC.

* **Natural Environment Research Council:** Swindon, UK

(1) External reviewer Directed Research Grants Program, 2004

* **New York State Department of Conservation:**

(1) Review of "Biothreat" model for hazard assessment of hazardous waste sites. 1987.

New York State Department of Health: Albany, New York

(1) Review of Research Scientist for promotion. 2005

* **New Zealand Ministry of the Environment:** Auckland, New Zealand.

(1) Lead consultant for national environmental risk assessment of organochlorine compounds, 1997-1999.

* **Netherlands Health Council,** 2002

(1) Review of method for the development of environmental risk limits for PCBs in the environment

* **NOVA WGBH Television:** Boston

(1) Review of Programming on Environmental Issues, 1994

* **Novartis, Inc.**

(1) Member of Expert panel to conduct an ecological risk assessment of atrazine as an Endocrine Disruptor, 1997

* **Oak Ridge National Laboratory, Environmental Sciences Division:** Oak Ridge, Tennessee

(1) Member Advisory Committee, 1998-2001.

(2) Chair Advisory Committee on Environmental Health Initiative, 2000

* **Ontario Ministry of the Environment; Water Resources Branch:** Toronto, Ontario

(1) Comprehensive review of: Water Quality Criteria Development Document on Benzene and Substituted Benzenes in the Aquatic Environment. 1985.

(2) Laboratory Sediment Biological Testing Protocol. 1991.

* **Ontario Pre-commercialization Business Development Fund**

(1) Re view of proposal, 2009

* **Organization for Economic Cooperation and Development:** Paris, France.

(1) Development of sediment quality criteria. 1991.

(2) Reviewer AOECD Guidelines for the Testing of Chemicals: Chironomid Toxicity Test Using Spiked Water, 1998

* **Partners in Research:** Arlington, VA

(1) Review of Ambient Aquatic Life Water Quality Criteria for Nonylphenol". External expert for review of this proposed US EPA regulation. 1997

* **Pharmacia & Upjohn, Inc.** Kalamazoo, Michigan (see Upjohn, Co.)

(1) Advisor on environmental stewardship, 1997.

* **Prismatic Images:** Flint, Michigan.

- (1) Educational films on fisheries and aquatic biology. 1984-1985.
- * **Proctor and Gamble, Inc.:** Cincinnati, OH
 - (1) Science advisory group on silicones in the environment. March, 1991.
- * **Research and Evaluation Inc:** Chapel Hill, N.C.
 - (1) Reviews of EPA Test Rules, Integrated Support Documents and Ad Hoc Reviews. 1985-Present.
- * **Research and Evaluation Associates Inc:** Chapel Hill, NC.
 - (1) Review of *ad hoc* document submitted to US EPA entitled "96-hr flow-through toxicity study of butylbenzyl phthalate to the freshwater crayfish, *Procambarus sp.* 1986.
- * **Residuals Management Inc.,** Madison, Wisconsin: 1982-1984.
 - (1) Fate of PCBs in Shiawassee River due to cleanup operations.
- * **City of Rochester, Michigan:** 1991-1992.
 - (1) Bioassays for waste water permitting.
- * **Risk and Decision Processes Center Philadelphia:** Philadelphia, Pennsylvania
 - (1) Review of issues in citing a hazardous waste facility. 1991.
- * **Saginaw National Watershed Initiative, 1994-Present.**
 - (1) Technical Steering Committee
- * **SETAC Foundation for Environmental Education:** Pensacola, Florida
 - (1) Chairman, Board of Directors, 1992-1993.
- * **Silicones Environmental Health & Safety Council**
 - (1) Science Advisory Group (SAG) for silicones in the environment, 1994
- * **South Florida Water Management District:** West Palm Beach, FL,
 - (1) Review of research results- "The Influence of Phosphorus on Mercury Cycling and Bioaccumulation in the Everglades". 1995
- * **Soviet All Union Scientific Research Institute for Protection of Waters:**

(1) Development of methodology for sediment toxicity assessment. 1988.

* **St. Mary's College, Halifax, Nova Scotia:**

(1) Tenure and Promotion review, Department of Biology, 2007.

* **State of New York, Department of Health**

(1) External examiner, promotion and tenure, 2004

* **Swedish Environmental Protection Agency:**

(1) Prioritization of Research Topics. 1990.

Swedish Research Council for Environment, Agricultural Sciences and spatial Planning: Stockholm

(1) Review of Applications for: "Support for strong research environments". 2005

* **Swedish Natural History Museum, Stockholm:**

(1) External Reviewer of the collections and research programs, 2002

(2) Reviewer of candidates for Professor and Director, 2007

* **Swiss Federal Institute for Environmental Science (EAWAG), Dübendorf, Switzerland, 2003**

(1) Project Fishnet. Advisor to the task force investigating possible causes of declines in fish stocks in Swiss Rivers.

* **Swiss National Research Programme:**

(1) Reviewer, Research Proposals, Endocrine Disruptors Programme

* **Texas Learning Technology Group**

(1) Technical advisor for development of a multi-media program entitled "EcoExpert: Health Risks in Our Town". This computer-based program is to be used in public and K-12 educational programs.

* **The Texas Institute for Advancement of Chemical Technology**

(1) External reviewer for Insights, V. 6 (1), 1995 "Chlorine in Perspective"

* **Three M Corporation: Minneapolis, Minnesota. 1993-Present**

- (1) Review of environmental toxicology programs. 1993
- (2) Assessment of products for environmental fates and effects. 1993.
- (3) Corporate environmental stewardship strategic planning. 1996-Present.
- (4) Ecological Risk Assessment of products containing perfluorinated compounds. 1999-2004
- (5) Registration of perfluorinated products in the United States and Japan. 2000

* **T N & Associates, Inc.:** Cincinnati, Ohio

- (2) Acquisition and Critical Review of Literature on the Ecological Effects of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and related Compounds on Aquatic Life and Associated Wildlife. Primary consultant on project design, data acquisition and report preparation. Contract to US EPA.

* **Trans-boundary Contaminants Work Group:** 2007-Present

A working group established by the Upper Columbia White Sturgeon Recovery Initiative (UCRWSRI) and Columbia River International Environmental Monitoring Program (CRIEMP) to investigate and prepare reports on contaminants in the Columbia River. The Committee is made up of individuals from the various state, provincial, federal, and tribal agencies as well as independent academics and consultants.

* **Transpharm, Inc.** Basel, Switzerland: 2007

- (1) Assessment of the steroidogenic properties of newly designed drugs.

* **Trent university.** Trent Ontario, Canada: 2007

- (1) Chemistry Department, Review of candidate for promotion and tenure

* **United States Conference of Mayors:**

- (1) Risk assessment of dioxins in soils due to use of urban bio-solids as a soil amendment, 1998.

* **University of Aachen, Germany**

- (1) External Examiner for Promotion, Biology Department

* **University of Aberdeen:** Aberdeen, Scotland, UK,

- (1) External promotion and tenure reviewer, 2004

- * **University of Agriculture of Malaysia:**
 - (1) External Assessor. 1990-1993.
- * **University of California:** Oakland, California
 - (1) External reviewer of grants for the Coastal Environmental Quality Initiative, 2004
- * **University of California - Davis Ecotoxicology Program**
 - (1) External Review Panel. 1994.
- * **University of California – Davis, Wildlife Health Center**
 - (1) Review grant proposals, 2001.
- * **University of California-Santa Cruz:** Santa Cruz, California
 - (1) External reviewer for promotion and tenure, 1997
- * **University of Guelph:** Guelph, Ontario, Canada
 - (1) External reviewer for Ph.D dissertation, 1997
- * **University of Prince Edward Island:**
 - (1) Promotion review, 2010
- * **University of Toronto:**
 - (1) External reviewer for promotion and tenure, 2004
- * **University of Turku:** Turku, Finland
 - (1) External examiner for PhD dissertation, 2006
- * **University of Wyoming:** Laramie, Wyoming
 - (1) External promotion and tenure reviewer, 2004
- * **Upjohn, Corp.,** Kalamazoo, MI. 1993-Present
 - (1) Environmental monitoring for organic and inorganic contaminants in water recharge system. 1993
 - (2) Monitoring for octachlordibenzo-p-dioxin in soil and groundwater. 1994

- (3) Sediment toxicity assessment of several plants in Michigan Maryland and Virginia. 1994-1995
- (4) Monitoring for concentrations of organic compounds in fishes from surface waters adjacent to production facilities. 1994-1995
- (5) Expert witness in defence in litigation relative to PCB contamination of the Kalamazoo River. Depositions and testifying witness.

* **U.S. Army Corps of Engineers:** Buffalo District Office.

- (1) Design of program for monitoring of residues leaching from contained dredge material disposal sites in Buffalo Harbour, 1987.

* **U.S. Dept. Interior, National Sea Grant Program:**

- (1) Scientific panel to review Chesapeake Bay Toxics Research Program. 1992.

* **US Dept. Agriculture, Agricultural Systems Program:**

- (1) Review of proposals to the National Research Initiative Competitive Grants Program. Annually 1998-2004

* **US Dept. Agriculture, Animal Growth and Nutrient Utilization Program:** Washington, DC

- (1) External reviewer of research proposals, 2004

* **U.S. EPA Office of Research and Development:**

- (1) Review of core research program. Chair person of SETAC *ad hoc* review committee.

* **U.S. Environmental Protection Agency/U.S. Department of Justice:** Washington, D.C.

- (1) Expert witness, United States of America against Petro Processors of Louisiana, Inc. Toxic waste site litigation, 1983. Background information, case development and testimony as aquatic toxicologist.
- (2) Office of Waste Programs Enforcement. Enforcement Case Support Expert Resources Inventory System. Clement Associates, Inc. Arlington, VA 1984-Present.

* **U.S. Environmental Protection Agency:** Washington, D.C.

- (1) Hudson River PCB Site Reassessment Committee, 1991.

- (2) Amphipod bioassay workshop, 1991-1992.
- (3) Sediment Quality Criteria Workshop, 1992-Present.
- (4) Water Quality Criteria for Metals, 1993-present.
- (5) Aquatic Risk Assessment and Risk Mitigation. Dialogue group for Pesticides. 1993. 17 member task force to develop procedures for assessing the hazard of pesticides to aquatic ecosystems. ***-Invited Delegate***
 -Member Steering Committee
- (6) Peer review panel workshop "Ecological Risk issues concerning 2,3,7,8-Tetrachlorodibenzo-p-dioxin. Minneapolis, MN, Sept. 14-15, 1993. ***Invited Delegate***
- (7) Program Review, Bioassessment Program, Environmental Research Laboratory- Cincinnati, OH, Sept. 7-8, 1994. ***Chairperson***
- (8) Peer Review, *Ecological Risk Assessment*, Risk Assessment Forum, US EPA. Alexandria, VA , August 16-18, 1994.
- (9) Acquisition and Critical Review of Literature on the Ecological Effects of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and related Compounds on Aquatic Life and Associated Wildlife. Primary consultant on project design, data acquisition and report preparation. Contract to US EPA, 1998.
- (10) Peer review panel for "Dioxin Reassessment-Wildlife", 1998.
- (11) Preparation of a briefing document for the interagency working group in support of the UNEO Global POPs treaty. "Organochlorine Residues in and Their Effects on Fish and Wildlife of the North American Great Lakes", John P. Giesy, Paul D. Jones, K. Kannan and Alan L. Blankenship.
- * **US Environmental Protection Agency:** Reviewer of ACE model Acute to Chronic Estimation (Version 2.0), 2003

* **U.S. Environmental Protection Agency, Science Advisory Board:** Washington, D.C.

Chartered member of the Executive Committee, 2008-2014

- (1) Ecological Processes and Effects Committee: Sediment Quality Guidelines for Metals in Sediments, 1999.

- (2) Ecological Processes and Effects Committee: Aquatic Life Criteria for Water-Metals, 1999.
- (3) Ecological Processes and Effects Committee: Ecological Soil Screening Levels for Superfund Sites, 1999.
- (4) Committee on Science Integration for Decision Making, 2009-2010
- (5) Scientific and Technological Achievement Awards Committee, 2009-2012

* **U.S. Environmental Protection Agency, Environmental Fate and Effects Branch, Office of Pesticide Programs, Science Advisory Panel:** Washington, D.C.

- (1) Ecological Committee on FIFRA Risk Assessment Methods (ECOFRAM), 1999

* **U.S. Environmental Protection Agency Environmental Biology Review Panel of the Exploratory Research Program, Office of Research and Development.** Review of proposals submitted to the program, including traveling to the Study Panel Meetings.

- (1) 1984 - Dallas, TX.
- (2) 1986 - Duluth, MN.
- (3) 1989 - Las Vegas, NV.
- (4) 1990 - Tempe, AZ.
- (5) 1991 - Knoxville, TN.
- (6) 1991 - Sarasota, FL.
- (7) 1994 - Washington, DC.

* **U.S. Fish and Wildlife Service, Great Lakes Fisheries Laboratory:** 1982-Present.

- (1) ATP analysis in fish eggs, effects of xenobiotics on fish eggs; trace metal speciation.
- (2) Review of Technical Document on Toxicity of Metals of Fishes. 1992.

* **VCI (Verband Der Chemische Industrie Deutschland):** Frankfurt, West Germany, 1988.

- (1) Development of systems to rank hazardous materials, based on probable toxicity, carcinogenicity, teratogenicity and persistence in the environment. Including terrestrial and aquatic organisms and plants. QSAR techniques were used. 1988.
- (2) Selection and implementation of models to predict the fate of organic compounds in aquatic systems. Design of pond studies to evaluate the models, including sensitivity analyses. 1988.

* **Verasa, Inc.** (For US EPA), 2002

- (1) Review of document entitled "Estimating Bioaccumulation Factors for Dioxins and Related Compounds".

* **Versar, Inc., Springfield VA.**

- (1) Review of the US EPA document entitled "Framework for Applications of the Toxicity Equivalence Methodology for Polychlorinated Dioxins, Furans Biphenyls and Ecological Risk Assessment". 2003

* **Wageningen Agricultural University:** Wageningen, The Netherlands

- (1) Program Review for Ecotoxicology, May 1999.

* **Warren Waste to Energy Inc: Warren, MI:** 1984.

- (1) Assessment as Release of Metals from Fluidized Bed Incineration of Municipal Waste for Energy Recovery from Waste. Permitting with State of Michigan.

* **Wildlife International Ltd:** St. Michaels, MD.

- (1) Development of Protocol for Multi-species Testing for the Effects of Pyrethroid Insecticides on Aquatic Organisms. 1985.

* **World Health Organization Advisorships**

- (1) Development of Toxic Equivalency Factors of polychlorinated dibenzo-*p*-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) for fish, birds and mammals: 1996-1999.
- (2) Global Assessment of the State-of-the-Science of Endocrine Disruptors. United Nations Environment WHO Program and International Programme on Chemical Safety: 1998.

* **W.W. Engineering & Science.** Grand Rapids, MI, 1994

(1) Review of report on sediment toxicity assessment for St. Mary's River, Michigan.