

JOHN P. GIESY, JR.
CURRICULUM VITAE
July 23, 2005

BORN: Youngstown, Ohio USA; August 9, 1948

CITIZENSHIP: USA

SECURITY CLEARANCES: Q:1974-1976 (SREL); L:1976 -1981 (SREL), 1993-1994 (Midway Island)

LANGUAGES: English, French, German

SCUBA CERTIFICATION: NASDS, 1978

MARRIED: Wife: Susan Elaine Damerell; September 5, 1970
Child: Emily Jean; born December 11, 1979

ADDRESS: Department of Zoology
Natural Science Building, Michigan State University
East Lansing, MI 48824-1222

TELEPHONE: Office: (517) 353-2000 **Home:** (517) 655-1532 or -6181
FAX: (517) 432-1984 **E-MAIL:** JGIESY@AOL.COM

PRESENT POSITION: Distinguished Professor of Zoology, Professor of Veterinary Medicine
Michigan State University

CONCURRENT APPOINTMENTS:

- * Visiting Professor, National Institute of Advanced Industrial Science and Technology (AIST)
- * Institute for Environmental Management Technology (EMTECH), Japan, 2004-Present
- * Adjunct Professor, Department of Veterinary Biomedical Sciences, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, 2004-Present
- * Chair Professor at large, City University of Hong Kong, Hong Kong, China; 2003-Present
- * Concurrent Professor: Nanjing University, Nanjing, China; 2003-Present
- * National Food Safety and Toxicology Center; 1997-Present
- * Center for Integrative Toxicology; 1981-Present
- * Ecology, Evolution and Behavior Program Faculty; 1986-Present
- * Center for Hazardous Waste Management; 1990-Present
- * Canadian Studies Center; 1983-Present
- * NIEHS Training Grant Faculty; 1990-Present
- * USDI Water Science Fellow Training Faculty; 1985-Present
- * Preceptor NIH Training Grant (Pathology/Veterinary Medicine); 1981-Present

EDUCATION:

- * B.S., Summa Cum Laude, Honors in Biology, Alma College, Alma Michigan, 1970
- * M.S., Michigan State University, East Lansing, Michigan, Limnology, 1971
- * Ph.D., Michigan State University, East Lansing, Michigan, Limnology, 1974

RESEARCH INTERESTS:

- * Fate and effects of trace substances in aquatic ecosystems
- * Trace metal speciation, cycling and toxicity
- * Simulation models of environmental fates of trace substances
- * Microcosms
- * Biochemical toxicology (Biomarkers)
- * Aquatic & Wildlife toxicology
- * Polycyclic aromatic hydrocarbons
- * Photo-induced toxicity in aquatic organisms
- * Avian toxicology and habitat requirements
- * Planar, halogenated hydrocarbons (PCBs, PCDD and PCDF)
- * Ecological risk assessment
- * Agricultural Chemicals
- * Endocrine modulating compounds
- * Perfluorinated compounds: analytical and environmental chemistry and toxicity

POSITIONS HELD:

Alma College

- * Instructor of Biology, 1972

Savannah River Ecology Laboratory

- * Assistant Research Ecologist: 1976-1980
- * Associate Research Ecologist: 1980-1981
- * Program Manager, Aquatic Ecology: 1979-1981

University of Georgia

- * Adjunct Assistant Professor, Zoology: 1976- 1980
- * Graduate Faculty: 1976-1980
- * Ecology Faculty: 1978-1980

University of South Carolina - Aiken Campus

- * Instructor of Biology: 1976

Emory University

- * Adjunct Assistant Professor of Biology: 1978-1981

University of Florida

- * Adjunct Assistant Professor of Environmental Engineering: 1978-1981

Michigan State University

- * Pesticide Research Center; 1981-1997
- * Professor of Fisheries and Wildlife; 1985-1997
- * Adjunct Assistant Professor of Fisheries and Wildlife: 1980
- * Associate Professor of Fisheries and Wildlife (35%): 1981-1985
- * Center for Environmental Toxicology: 1981-1991
- * Coordinator of Environmental Effects Research, College of Natural Science (10%), Pesticide Research Center (45%): 1981-1987
- * National Institutes of environmental Health Safety Training Faculty: 1991-Present

University of Bayreuth, Bayreuth Germany

- * Visiting Professor, Chair of Ecological Chemistry and Geochemistry: 1987-1988

Office of Water, Soil and Air Hygiene Federal Republic of Germany, Berlin

- * Visiting Scientist: 1989

Italian Hydrobiological Institute, of the Italian National Research Council, Pallanza, Italy

- * Visiting Scientist: 1989-1990

Biological Research Station of Helgoland, List/Sylt, Germany

- * Visiting Scientist: 1993

National Center of Hygiene Medical Ecology and Nutrition, Sofia Bulgaria

- * Training program-Visiting Scientists, 2002-2003.

Department of Biology and Chemistry, City University of Hong Kong, Hong Kong, SAR, China

- * Chair Professor at Large: 2003-Present.

Nanjing University, Nanjing, China

- * Concurrent Professor of Environmental Sciences Program, 2003-Present

National Institute of Advanced Industrial Science and Technology (AIST) Institute for Environmental Management Technology (EMTECH), Japan

- * Visiting Professor: 2004-Present.

HONORS AND AWARDS:

- * National Science Foundation Fellow: 1969
- * Alpha Society (Scholarship, Leadership, Athletics): 1970
- * Phi Sigma Pi (Scholastic Honorary): 1969
- * Omicron Delta Kappa (Men's Leadership Honorary): 1970
- * Beta Beta Beta Alma College Chapter (Biology Honorary),
President: 1969-1970
- * **Frank G. Brooks Award**: 1970
- * **Woodrow Wilson Fellow** - Honorable Mention: 1970
- * **National Science Foundation Fellow** - Honorable Mention: 1970
- * **Fulbright Fellow**, Environmental Toxicology Program University of Bayreuth, Federal Republic of Germany: 1987-1988
- * **Chevron Distinguished Lecture** - University. California-Davis: 1989
- * **Sigma Xi Junior Investigator Research Award** Michigan State University Chapter (for Continued Excellence in Scientific Research): 1989
- * Researcher of the Month Laboratory Animal Resources Department, Michigan State University (for excellence in research on animals): 1989
- * **CIBA GEIGY Agricultural Recognition Award** in Environmental Science: 1990
- * Pew Scholars Program - Presidential Nominee, Michigan State University: 1992
- * **Willard F. Shephard Award** for service to the field of pollution control. Michigan Water Pollution Control Association: 1992
- * Election to the International Platform Association: 1992
- * **International Man of the Year in Environmental Toxicology** - International Biographical Centre, Cambridge, England:
 - (1) 1992-1993
 - (2) 2000-2001

- * ***Distinguished Professor Award*** - Michigan State University: 1993

- * ***QUINTESSENCE: Excellence in Environmental Contamination & Toxicology***: 1994
 For the publication: Hoke, R.A., P.D. Jones, A.E. McCubbin, M.J. Zabik and J.P. Giesy. 1994. Use of *in vitro* assays of sediment extracts to detect and quantify contaminants with similar modes of action. *Chemosphere* 28:169-181.

"This publication was selected as an example of excellence in the field of Environmental Contamination & Toxicology for 1) its significance and impact on the scientific field as a whole; quality of design and overall scientific excellence."

- * ***Vollenweider Environmental Science Award***: 1994. Awarded annually by Environment Canada Government (Canadian Center For Inland Waters, Burlington) for "excellence in International Freshwater Research and Scientific Leadership"

- * ***SETAC Founders Award***: 1995. This is the most prestigious award presented by the Society of Environmental Toxicology and Chemistry (SETAC) to an Individual for Aoutstanding contributions to the fields of Environmental Toxicology & Chemistry”.

- * ***Alma College Distinguished Alumni Award***: 1996. This award is given an individual who has “distinguished themselves through service to society and Alma College”.

- * ***Best student paper Award from the Society of Environmental Toxicology and Chemistry: 1997***

 Richter, C.A., J.P. Giesy, V.L. Tieber and M.S. Denison. 1997. An *in vitro* Rainbow Trout Cell Bioassay for Aryl Hydrocarbon Receptor-Mediated Toxins. *Environ. Toxicol. Chem.* 16:543-550.

- * ***Best student paper Award from the Society of Environmental Toxicology and Chemistry: 1999***

 Villeneuve, D.L., C.A. Richter, A.L. Blankenship and J.P. Giesy. 1999. Rainbow Trout Cell Bioassay Derived Relative Potencies for Halogenated Aromatic Hydrocarbons: Comparison and Sensitivity Analysis. *Environ. Toxicol. Chem.* 18:879-888.

- * ***Best student paper award from International Symposium on Halogenated Environmental Organic Pollutants and POPs, Organohalogen Compounds, 2001.***

 Khim, J.-S., K.-T. Lee, D. L. Villeneuve, K. Kannan, J. P. Giesy and C.-H. Koh. 2001. Characterization of Dioxin-Like and Estrogenic Compounds in Environmental Samples from Onsan Bay and It’s Inland Region, Korea. *Organohalogen Compounds.* 51:31-34.

- * ***ISI Highly Cited Author Recognition- 2002***: J.P. Giesy was identified by Current Contents as one of the world’s most cited authors. Based on the frequency with which his papers are cited by other authors, Current Contents has identified Prof. Giesy as a person who is in the top 0.1% of active authors. In 2001 Prof. Giesy was recognized as an ISI Highly Cited Author (SIHighlyCited.com).

- * **ISI Highly Cited Author Recognition-2002:** J.P. Giesy was the 7th most cited author out of approximately 20,000 people who published in the fields of Ecology and Environment over the period 1992-2002 (ISI Current Contents: ISIHIGHLYCITED.COM)
<http://www.in-cites.com/scientists/env-eco.html>
- * **InCites Highly Cited Author Recognition-2003:** J.P. Giesy was the 6th most cited author in the Fields of Ecology and Environment over the period of 1993-2003:
<http://www.in-cites.com/top/2003/fourth03-env.html>
- * **InCites Highly Cited Author Recognition-2003:** J.P. Giesy is the 3rd most cited author in the area of Polychlorinated Biphenyls in the environment:
<http://www.esi-topics.com/pcb/interviews/JohnPGiesy.html>

InCites Highly Cited Author Recognition-2004: J.P. Giesy was the 6th most cited author in the Fields of Ecology and Environment over the period of 1994-2004. Based on 147 papers monitored for the period Prof. Giesy had a total of 3,060 citations with an average citations per paper of 20.82:
<http://www.in-cites.com/top/2004/fourth04-env.html>

- * **Best Ecological Risk Assessment Paper published during 2001 in Human and Ecological Risk Assessment**

Solomon K. R., Giesy J.P., Kendall R. J., Best L. B., Coats J. R., Dixon K. R., Hooper M. J., Kenaga E.E., McMurry ST. 2001. Chlorpyrifos: Ecotoxicological Risk Assessment for Birds and Mammals in Corn Agro-ecosystems. *Human Ecol Risk Assess.* 7:497-632.

- * The following paper was selected by the Journal Toxicological Sciences to be highlighted and a special review article written:

Hu, W., P. D. Jones, B. L. Upham, J. E. Trosko, C. Lau and J. P. Giesy. 2002. Inhibition of Gap Junctional Intercellular Communication by Perfluorinated Compounds in Dolphin Kidney and Rat Liver Epithelial Cell Lines. *Tox. Sci.* 68:429-436.

The Citation for the Highlight article is:

Ruch, R.J., 2002. Toxicological Highlight: Intercellular Communications, Homeostasis and Toxicology. *Toxic. Sci.* 68:265-266.

- * **SETAC Environmental Education Award: 2002.** This is one of the 5 most prestigious awards given by the Society of Environmental Toxicology and Chemistry (SETAC). “The award is presented annually to recognize an individual, group or organization for significant contributions to environmental education. You have been recognized by the society with this award for contributions to improving environmental science curricula and development of programs to enhance environmental literacy and awareness at the undergraduate and graduate levels at your university and throughout the world as well as through participation in many advisory boards, foundations, committees and consultancies. In addition the award represents a lifetime of impact on all aspects of environmental science through the many outstanding students, post docs and visiting scientists whom you have trained.”

- * *Who's Who Award for Achievement: 2002*
- * *21st Century Award for Achievement: 2002*
- * *Sir E.W. Russell Lectureship Award: 2003 Given by the British Soil Science Society for significant contributions in science.*
- * *All-University Excellence in Diversity Award—Individual Lifetime Achievement, Michigan State University: 2005*

BIOGRAPHICAL LISTINGS: Prof. Giesy is listed in 38 Biographical Listings

- * *Who's Who in the World*: 1995-Present
- * *Who's Who in America*: 2005-Present
- * *Who's Who in American Colleges and Universities*: 1970
- * *American Men and Women of Science*: annually 1976-Present
- * *Who's Who in Government*: annually 1976-1980
- * *American Men and Women of Biology*: annually 1976-1982
- * *Who's Who in the South and Southwest*: Annually 1976-1981
- * *Who's Who in the Midwest*: Annually 1982-Present
- * *Great Lakes Experts Directory*: 1982
- * *International Directory of Distinguished Leadership*: Annually 1985-Present
- * *Men of Achievement*: Annually 1985-Present
- * *International Who's Who of Intellectuals - Vol. VII*: Annually 1985-Present
- * *The International Book of Honor*: 1985-Present
- * *Directory of Distinguished Americans*: Annually 1985-Present
- * *Who's Who in Frontiers of Science and Technology*: Annually 1985-Present
- * *Dictionary of International Biography*: Annually 1985-Present
- * *Community Leaders of the World*: Annually 1985-Present
- * *Personalities of America*: Annually 1986-Present
- * *Who's Who in Technology Today*: Annually 1986-Present
- * *Two Thousand Notable Americans*: Annually 1986-Present
- * *University Council on Water Resources Expertise Directory*: 1986
- * *Who's Who in Science and Engineering*: Annually 1991-Present
- * *Environmental Profiles: An International Directory of Projects and People*: 1991
- * *Air, Waste and Environmental Management Research Faculty Profile: Air & Wast Management Association*: Annually 1992-Present
- * *Who's Who in Technology*: Annually 1994-Present
- * *Who's Who in Science and Technology*: Annually 1994-Present
- * *Who's Who in Science and Engineering*: Annually 1994-Present
- * *Outstanding People of the 20th Century*: 2000
- * *The Dictionary of Leading Americans*: 2000
- * *Strathmore's Who's Who*: 2002-2003
- * *America's Registry of Outstanding Professionals* 2002-2003
- * *Two Thousand Eminent Scientists of Today*, 2002
- * *Two Thousand Intellectuals of the 21st Century*, 2002
- * *Living Science, an in-depth guide to Contemporary Scientists and Their Work*, 2002
- * *Two Thousand Outstanding Intellectuals of the 21st Century*: 2002-Present
- * *Living Legends*, International Biographical Centre, Cambridge, UK, 2003-Present
- * *The Lifetime of Achievement Award*, International Biographical Centre, Cambridge, UK; 2003
- * *Dictionary of International Biography*, International Biographical Centre, Cambridge, UK; 2004

ADVISORSHIPS:

National Academy of Science, 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*

National Institutes of Health Advisorships:

- 1) National Toxicology Program Board of Scientific Councilors: 2003-2006

US EPA Advisorships:

- 1) Board of Scientific Counselors (BOSC) Executive Committee: 2004-2006
Nomination Committee, 2005
Committee on Risk Assessment Workshop, US EPA/US NAS, 2004-2005

World Health Organization Advisorships:

- 1) Development of Toxic Equivalency Factors of polychlorinated dibenzo 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, 2004-2007.

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- April 11, 2002.
- * **American College of Toxicology:** 1990-93
- * **American Fisheries Society:** 1970-1976, 1988
- * **American Fisheries Society - Michigan Chapter:** 1984-Present
- * **American Institute of Biological Sciences:** 1978-Present
- * **American Institute of Fisheries Research Biologist:** 1982-Present
- * **American Society of Limnology and Oceanography:** 1970-Present
 - 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-Present
 - 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):**
- * **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-Present
 - *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-Present
 - Publications Committee

- * **Federation of American Scientists for Experimental Biology:**

- * **Georgia Fisheries Workers:** 1977-1980

- * **Great Lakes United:** 1985-Present

- * **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-Present
 - Board of Directors: 1992-1995
 - Chairperson, Annual Meeting Committee: 1993-1996
 - Co-Chairperson, Annual Meeting, E. Lansing, MI: 1995
 - Session chairperson, "Biological Effects of Microcontaminants". 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:** 1985-Present
- * **International Society of Theoretical and Applied Limnology:** 1972-Present
 - 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-Present
- * **Midwest Pollution Control Biologists:** 1988-Present
- * **North American Benthological Society:** 1971-1974; 1980-1981
- * **Phycological Society of America:** 1979-1981
- * **Society for Environmental Geochemistry and Health:** 1979-Present
- * **Sigma Xi-Michigan State University Chapter:** 1974-Present
 - **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, ABiosensors", 20th Annual Meeting, Philadelphia, PA, November, 1999
 - Member panel on ASupport 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: ABiosensors for Environmental Monitoring”, 8th annual meeting, April 14-18, 1998, Bordeaux, France.

* **SETAC-Europe, Russian Division**

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

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

PRESENTATIONS:

Prof. Giesy has made 885 presentations. These include 418 to local, national and international meetings of scientific societies (See section on memberships in professional societies); 278 invited presentations to workshops and symposia and presented 178 invited lectures and seminars. He has served as program or session chair on 207 occasions at scientific meetings. He has been an invited participant at 263 workshops or symposia.

ABSTRACTS READ:

*** American Association for the Advancement of Science:**

- (1) "Concentrations of Cd, Cu, Mn, Pb, and Zn in Fishes in a Highly Organic Soft Water Pond." With J. G. Wiener. AAAS, Houston, Texas. 1978.

*** American Chemical Society**

- (1) "Cadmium, Copper and Lead Binding Capabilities of Naturally Occurring Organics." National Meeting, Miami, FL, 1978.
- (2) "Anomalous Breakthrough of Benzo(a)pyrene during Concentration with Amberlite^R XAD-4 Resin from Aqueous Solutions." To: National Meeting, Las Vegas, NV, September, 1980 with P. F. Landrum.
- (3) "Photochemically Activated Toxicity." To Great Lakes Regional Chapter Annual Meeting. *Invited*, plenary paper in special session, *Environmental Update: Problems of the Great Lakes Region*. May, 1984.
- (4) "Polychlorinated Diaromatic Hydrocarbons in North Pacific Albatrosses: Contamination Exceeds Thresholds for Effects". To: Pacific Chapter Annual Meeting, Dec. 1995. With J.P. Ludwig, C.L. Summer, and P.D. Jones
- (5) "Instrumental and Bioanalytical Measures of Endocrine Disruptors in Water". To: 216th Annual Meeting, August 23-30, 1998, Boston. MS. With S.A. Snyder, D.L. Villeneuve, T.L. Keith, E.M. Snyder, A.L. Blankenship and K. Kannan.

*** American Chemical Society-Great Lakes Regional Chapter**

- (1) "Emerging Issues of Concern to the Great Lakes". With K. Kannan. To: 33rd Regional Meeting of the Great Lakes Chapter of the American Chemical Society, June 11-13, 2001, Grand Rapids, MI.
- (2) "An Historic Perspective on Contaminants in the Great Lakes". With P.D. Jones. To: 33rd Regional Meeting of the Great Lakes Chapter of the American Chemical Society, June 11-13, 2001, Grand Rapids, MI.

* **American College of Toxicology:**

- (1) "Effects of Planar Chlorinated Hydrocarbons on Fish, Fish-eating Birds and Furbearers in the Great Lakes Region". Annual Meeting, Orlando, Florida, November, 1990. **Invited**.

* **American Fisheries Society:**

- (1) "Frequency Distributions of Trace Metal Concentrations in Five Species of Freshwater Fishes." With J. G. Wiener. Annual Meeting, Detroit. 1976.
- (2) "Chemical Analysis of Fishes for Monitoring Trace Metal Contamination of Surface Waters." With J. G. Wiener. 109th Annual Meeting, September, 1979.
- (3) "Hepatic Enzyme systems as biochemical indicators of the effects of contaminants on chinook salmon reproduction". With G. T. Ankley and D. E. Tillitt. Annual Meeting, Toronto, Canada. September, 1988.
- (4) "Detroit River sediment quality assessment by the *Chironomus tentans* bioassay". With C. J. Rosiu and R. G. Kreis. 118th Annual Meeting, Toronto, Canada. September, 1988.
- (5) "Characterization of epidermal growth factor binding in hepatic plasma membranes of rainbow trout". With J. L. Newsted, 118th Annual Meeting, Toronto, Ontario. September, 1988.
- (6) "Sediment toxicity evaluation using Microtox^R and seven-day *Pimephales promelas* larval survival and growth assays". With R. A. Hoke, G. T. Ankley and J. L. Newsted. 118th Annual Meeting, Toronto, Ontario. September, 1988.
- (7) "Hepatic enzyme systems of biochemical indicators of the effects of contaminants on chinook salmon reproduction". With G. T. Ankley and D. E. Tillitt. 118th Annual Meeting, Toronto, Ontario. September, 1988.
- (8) "Coplanar polychlorinated biphenyl (PCB) congeners in trimmed fillets of Lake Michigan chinook salmon: Implications for fish consumption advisories". With L. L. Williams. 121th Annual Meeting, San Antonio, TX. April, 1991.
- (9) "Status and Trends in Concentrations of Xenobiotics in and Their Effects on Fishes of the Great Lakes". 126th Annual Meeting, Dearborne, Michigan, August, 1996. **Invited**
- (10) "Calibration of Biomarkers of Environmental Estrogen Exposure to Relevant Reproductive Endpoints". With K.M. Nichols, V. Kramer, S. Pierens and S. Miles-Richardson. To: 127th Annual Meeting, Monterey CA, August, 1997.
- (11) "Effects of Estrogenic Substances on Laboratory and Feral Fishes". With P. D. Jones, S. A. Villalobos and D. L. Villeneuve. To: 129th Annual meeting, August 29-September 2, 1999, Charlotte, North Carolina. **Invited**

* **American Fisheries Society - Michigan Chapter:**

- (1) "The Histological and Biochemical Consequences of Subacute Cadmium Exposure: A Comparison of Methods for the Evaluation of Toxic Effects." With D. Versteeg. Annual Meeting. E. Lansing, MI. March, 1984. *Invited*.
- (2) "Anthracene Phototoxicity in Sunfish: Dose/dose-rate Response and Predictability in the Environment." With J. Oris. Annual Meeting, East Lansing, MI. March 19, 1984. *Invited*.
- (3) "Toxicity of Detroit River Sediments." Annual Meeting, March, 1987. Invited.

* **American Society of Mechanical Engineers:**

- (1) "The Use of Artificial Ecosystems in Ecological Research." National Meeting, November, 1977. Atlanta, Georgia. *Invited*.

* **American Society of Limnology and Oceanography:**

- (1) "Growth Stimulation of the Green Alga *Scenedesmus obliquus* (Türp) Kutz by Humic Acids." 38th Annual Meeting. 1975.
- (2) "Metals Associated with Dissolved Organic Carbon in Two Southeastern Streams." 39th Annual Meeting. 1976.
- (3) "Metal Binding Capacity of Soft, Acid Organic Waters." 40th Annual Meeting. 1977.
- (4) "Effects of Naturally Occurring Aquatic Organic Fractions on Cadmium Toxicity to *Simocephalus serrulatus* (Daphnidae) and *Gambusia affinis* (Poeciliidae)." With G. J. Leversee and D. R. Williams. 41st Annual Meeting. 1978.
- (5) "Metal Binding Capacity of Selected Maine Surface Waters." With L. A. Briese. 1st Winter Meeting. 1978.
- (6) "Cadmium and Zinc Accumulation and Elimination by Freshwater Crayfish." 2nd Winter Meeting. 1979.
- (7) "Seasonal Variation of Phosphoadenylate Concentrations and Adenylate Energy Charge in Two Freshwater Clams." 43rd Annual Meeting. 1980.
- (8) "The use of *in situ* floating microcosms to study decomposition processes in a southeastern blackwater stream." With M. Allred. 43rd Annual Meeting. February, 1980.
- (9) "Effects of Dissolved Organic Carbon on Accumulation of Polycyclic Aromatic Hydrocarbons by *Daphnia magna*." With G. J. Leversee, T. Fannin and P. F. Landrum. 44th Annual Meeting, Raleigh, NC, June, 1982.

- (10) "Biochemical Indicators of Stress." With D. Versteeg and R. Graney. 48th Annual Meeting. Cosponsored by Ecological Society of America, American Society of Limnology and Oceanography and International Joint Commission. Minneapolis, MN, June, 1985. *Invited*.
- (11) "Effects of Ultraviolet Radiation on Freshwater Algae." With W. R. Gala. 49th Annual Meeting. Narragansett, RI. June, 1986.
- (12) "The effects of current and future ultraviolet-B (UV-B) intensities on primary production in Lake Michigan." With W. Gala. 51st Annual Meeting. Boulder, CO., June, 1988.

* **American Society for Testing Materials (Section E.47):**

- (1) "Benzo(a)pyrene Kinetics in Several Laboratory Microcosms. 4th ASTM Symposium on Aquatic Toxicology." With G. S. Laversee, S. Gerould, R. Schloesser, J. Bowling, J. Haddock and S. Bartell. October, 1979.
- (2) "Fate of Aromatic Hydrocarbons in Stream Microcosms: A Stimulation Model." 4th Symposium on Aquatic Toxicology and Hazard Assessment. With S. M. Bartell, J. P. Giesy, P. Landrum and G. J. Laversee. 1980.
- (3) "Research Needs on Using Multispecies Tests to Assess the Effects of Chemicals on Aquatic Life." 8th Annual Aquatic Toxicology Symposium, Ft. Mitchell, KY. April, 1984. *Invited*.
- (4) "Field Utilization of Clinical Measures of Xenobiotic Stress." With D. L. Versteeg and R. L. Graney. 10th Symposium on Aquatic Toxicology and Hazard Assessment. New Orleans, LA. May, 1986.
- (5) "Using Flow Cytometric Techniques to Assess the Toxicity of Sodium Dodecyl Sulfate (SDS) and Atrazine to Algae." With W. Gala. 13th Symposium on Aquatic Toxicity and Hazard Assessment, Atlanta, GA. April, 1989.
- (6) "The H4IIE Rat Hepatoma Cell Bioassay as a Tool for the Assessment of Bioaccumulation". With D. E. Tillitt, P. D. Jones, J. L. Newsted, D. A. Verbrugge. 14th Symposium on Aquatic Toxicity and Hazard Assessment, San Francisco, CA. April, 1990.

* **American Society of Zoologists:**

- (1) "The Effects of Nutritional Stress on Muscle Phosphoadenylate Concentrations and Adenylate Energy Charge of Surface and Cave Crayfish." Annual Meeting, Miami, FL. 1980.

* **The Association for Canadian Studies in the United States (ACSUS):**

- (1) "Impact of Toxic Substances on Fish and Wildlife of Transboundary Aquatic Exosystems." 20th Annual Meeting, November 20-23, 1991. Boston, Massachusetts. *Invited*.

- (2) Panel Discussion "The Importance of an Interdisciplinary Approach to U.S. Canada Environmental Resource Management." 20th Annual Meeting, November 20-23, 1991. Boston, Massachusetts. *Invited*.

* **Association of Southeastern Biologists:**

- (1) "Change in Adenylate Energy Charge of *Corbicula fluminea* (Pelecypoda) Foot Muscle Tissue due to Cadmium Exposure." With R. D. Bingham and C. S. Duke. Annual Meeting, Tuscaloosa, AL. 1978.
- (2) "Effects of Cadmium on Adenylate Energy Charge in the Crayfish (*Procambarus pubescens*)." With C. S. Duke, G. W. Dickson, G. J. Leversee and R. D. Bingham. Annual Meeting, Tuscaloosa, AL. 1978.

* **Beta Beta Beta, Alma College Chapter:**

- (1) "Effects of Automobile Exhaust on Forest Litter Invertebrates." North Central Regional Annual Meeting, Bowling Green, OH. With Arlan L. Edgar. Best Paper Award. 1970.

* **British Soil Science Society:**

- (1) "Perfluorinated Compounds in the Environment-A Novel Class of Environmental Contaminants". To: Annual meeting, September 8-10, 2003, Aberdeen, Scotland. Invited, Plenary Keynote (Russel Lecture).

* **Canadian Society of Chemistry:**

- (1) "Trace Metal Speciation of Wyoming Surface Waters." 70th Annual Meeting, Quebec City, Quebec. 1987. *Invited*.
- (2) "Estrogenic Compounds in Aquatic Systems: *In vivo* and *in vitro* Methods for Monitoring for Exposure and Effects". Symposium on Endocrine Disruptors, 80th Annual Meeting Canadian Society for Chemistry, May 31-June 4, 1997, Windsor, ON. *Invited*

* **Central Great Lakes Regional Chapter, Society of Environmental Toxicology and Chemistry:**

- (1) "Photoinduced Toxicity of Environmental Contaminants in Aquatic Organisms." Spring Meeting, Midland, MI. 1984.
Fall Meeting, Ann Arbor, MI. 1984.
- (3) "Quantitative Structure-Toxicity Model of Photodynamic Activity of PAH to *D. magna*." With J. L. Newsted. Spring Meeting, April 18, 1986, E. Lansing, MI.
- (3) "Alterations in the Concentrations of free Amino Acids as an Indicator of Toxicant-induced Stress in the Freshwater Bivalve *Corbicula fluminea*." With R. L. Graney. Spring Meeting, April 18, 1986, E. Lansing, MI.
"Annual Spring Meeting." Midland, Michigan, March 18, 1987.

"Annual Fall Meeting." Ann Arbor, Michigan, October 7, 1988.

- (4) "Concentrations and Effects of Planar, Chlorinated Hydrocarbons in Fish and Wildlife of the Great Lakes Region". With D. Tillitt, L. Williams, P. Jones, D. Verbrugge and N. DeGalan. Fall Meeting, Lansing, MI, November, 1989.
- (5) "Relationship of Contaminants and Birth Defects in Birds of the Great Lakes." Spring Meeting, April 5, 1991, Ann Arbor, MI.
- (6) "An ELISA method for the determination of PCBs in sediment and fish." With C. Richter. Fall meeting, September 24, 1992. East Lansing, MI.
- (7) "Sediment toxicity assessment." With J. Besser, J. Drake and J. Kubitz. Fall meeting, September 24, 1992. East Lansing, MI.
- (8) "Environmental toxicology of Great Lakes Contaminants." With L.L. Williams. Joint meeting with Michigan Regional Chapter of the Society of Toxicology. May 14, 1993. East Lansing, MI.
- (9) "Use of bald eagles as monitors of water quality: Experience from the Great Lakes and Baltic Sea". With W.W. Bowerman and B. Helander. October 1, 1993, E. Lansing.
- (10) Moderator Panel discussion of the Great Lakes Initiative. October 1, 1993, E. Lansing.
- (11) "Survey of Several Organic Contaminants and Mercury in Whole Fish Tissues from a Mine-Drainage Upper Michigan Peninsula Lake". With B.W. Nagy, K.S. Henry, N.R. Kevern, and M.J. Zabik. May 20, 1996, E, Lansing, MI.
- (12) "PCBs in the Detroit River Water Column". With K.L. Froese, D.A. Verbrugge, S.A. Snyder and F. Tilton. May 20, 1996, E, Lansing, MI.
- (13) "Screening Aqueous Mixtures for Estrogenic and Dioxin-like Compounds". With S.A. Snyder, D. Villeneuve, E. M. Snyder and T. Keith. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI.
- (14) "Evaluation of Reproductive Endpoints in Goldfish Exposed in situ to Waste Water Treatment Plant Effluents in South Central Michigan", with E. M. Snyder, K. M. Nichols, S. L. Pierens and S. A. Snyder. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI.
- (15) "Development of Biomarkers, in vitro Assays and Determination of AEstrogenic" Effects in Fish". With K. M. Nichols, S. A. Snyder, D. L. Villeneuve, S. R. Miles-Richardson, S. E. Pierens, A. L. Blankenship and V. J. Kramer. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI. *Invited Keynote*
- (16) "Accumulation of Tributyltin and its Breakdown Products in Water Birds from the Great Lakes and Coastal United States and Sea Ducks from Canada". With K. Kannan,

J. E. Elliott, C. Duda and S. Snyder. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI.

- (17) Butyltins in Fishes of the Southern Baltic Sea". With C. Duda, K. Senthikumar, D. Villeneuve, K. Kannan and J. Falandyz. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI.
- (18) "Assessment of Short-term and Chronic Toxicity of Polydimethylsiloxane (PDMS) to *Chironomus tentans* and *Hyallolela azteca*". With K. S. Henry. To: Annual Spring Meeting, March 27, 1998, East Lansing, MI.
- (19) "Butyltins in Fishes of the Southern Baltic Sea" With C. Duda, K. Senthikumar, D. Villeneuve, K. Kannan and J. Falandyz. To: 1998 Annual meeting, East Lansing, MI, March 27, 1998.
- (20) "Assessment of Short-term and Chronic Toxicity of Polydimethylsiloxane (PDMS) to *Chironomus tentans* and *Hyallolela azteca*". With K. S. Henry. To: 1998 Annual meeting, East Lansing, MI, March 27, 1998.
- (21) "Accumulation of Tributyltin and it's Breakdown Products in Water Birds from the Great Lakes and Coastal United States and Se Ducks from Canada". With K. Kannan, J. E. Elliott, C. Duda and S. Snyder. To: 1998 Annual meeting, East Lansing, MI, March 27, 1998.
- (22) "Screening Aqueous Mixtures for Estrogenic and Dioxin-Like Compounds". With S.A. Snyder, D. Villeneuve, E.M. Snyder and T. Keith. To: 1998 Annual meeting, East Lansing, MI, March 27, 1998.
- (23) "Evaluation of Reproductive Endpoints in Goldfish Exposed in situ to Waste Water Treatment Plant Effluents in South Central Michigan". With K. M. Nichols, S.A. Snyder, E.M. Snyder, D.L. Villeneuve, S.R. Miles-Richardson, S.E. Pierens, A.L. Blankenship and V.J. Kramer. To: 1998 Annual meeting, East Lansing, MI, March 27, 1998. *Invited, Plenary, Keynote.*

* **Chesapeake-Potomac Regional Chapter of SETAC:**

- (1) "Bioavailability of Lead by Swine: A Hazard Assessment of Midvale, Utah. Annual Meeting, June 7, 1991, Washington, D.C.

* **Colonial Waterbird Society.**

- (1) "Effects of Toxic Chemicals on Cormorants of the Great Lakes: Populations and Individuals". Annual Meeting, September 15-17, 1994, Oxford, Mississippi. with J.P. Ludwig, D.V. Weseloh, G.A. Fox, M. Ludwig, and H. Auman.

* **Indiana, Ohio, Kentucky Regional Chapter of SETAC:**

- (1) "Accumulation of Chlorinated Hydrocarbons by and Their Effects on Wildlife of the Great Lakes Region". Annual Meeting, June 14, 1991, Cincinnati, Ohio.
- (2) "Panel discussion on "Confronting Difficult Environmental Issues: Science and Regulation".

* **Ecological Society of America:**

- (1) "Frequency Distributions of Cu, Zn, Ni, Cd and Pb in Populations of Five Freshwater Fishes." With J. G. Wiener, A. Harmon and L. A. Briese. ESA (AIBS), Annual Meeting, New Orleans. 1976.
- (2) "Distribution Potential of *Myriophyllum spicatum* (Angiospermae, Haloragidaceae) in Soft water Systems." With L. A. Tessier. ESA (AIBS), New Orleans. 1976.
- (3) "Effects of Stressors on Adenylate Nucleotide Concentration in Invertebrates." Annual Meeting with American Institute of Biological Sciences. With C. Duke, R. D. Bingham and S. Denzer. 1978.
- (4) "Trace Metal Speciation in Southeastern Surface Waters. Special Symposium on the Limnology in the Southeast." With L. A. Briese. Annual Meeting with AIBS, Athens, GA. 1978.
- (5) "Frequency Distributions of Essential and Nonessential Elements in *Micropterus salmoides*." With J. E. Pinder, III. Annual Meeting. August, 1979.
- (6) "Implications of Southeastern Limnology for Trace Metal Movements and Effects." Aquatic Ecology in the Southeast, A symposium sponsored by the Southeastern Chapter of the Ecological Society of America, Augusta, GA. 1979.

* **Entomological Society of America:**

- (1) "Mesocosm Experimental Design Strategies: Advantages and Disadvantages in Ecological Risk Assessment". With R. L. Graney. To Symposium on Using Mesocosms to Assess the Aquatic Ecological Risk of Pesticides; Theory and Practice. National Conference ESA, Boston, MA. November, 1987. *Invited*.

* **Federation of American Scientists for Experimental Biology:**

- (1) "Studies of Renal Adenine Nucleotide Biochemistry in Mice with the Chediak-Higashi Syndrome." With K. Jamison and G. Padgett. Annual Meeting, Anaheim, CA. April, 1985.

* **Geological Society of America**

- (1) "Spatial and Temporal Patterns of Mercury Loading in Michigan's Inland Lakes. With M. Parsons, D. T. Long and S.S. Yohn". To: Annual Meeting, Denver, CO., November 7-10, 2004.

* **Georgia Fisheries Workers:**

- (1) "Adenylate Energy Charge as an Indicator of Stress in Invertebrates." 1979. *Invited*.

* **Indiana Academy of Science:**

- Annual Meeting, South Bend, IN, Nov. 1988.

* **International Association for Great Lakes Research:**

- (1) "Lysosomal Enzyme Release as an Indicator of Xenobiotic Exposure in Bluegill Sunfish." With D. J. Versteeg. Annual Meeting, St. Catherines, Ontario, May, 1984.
- (2) "Relationship between Residue Contamination in Chinook Salmon and Rearing Temperature on Rearing Mortality." With J. L. Newsted. Annual Meeting, St. Catherines, Ontario, May, 1984.
- (3) "Toxicity of Sediments in the Lower Detroit River." With R. L. Graney, J. L. Newsted, C. J. Rosiu, F. Horvath and R. G. Kreis. Annual Meeting, Ann Arbor, MI, May, 1987.
- (4) "Sediment Toxicity to Benthic Invertebrates in the Laurentian Great Lakes." With R. L. Hoke. 31st Annual Meeting, Hamilton, Ont. *Invited Keynote Address*. May, 1988.
- (5) "Detroit River Sediment Quality Assessment Using the *Chironomus tentans* Bioassay." With C. J. Rosiu. 31st Annual Meeting, Hamilton, Ont., May, 1988.
- (6) "Comparison of Ethoxyresorufin O-deethylase Induction in H4IIE rat Hepatoma Cells by Extracts from Great Lakes Environmental Samples with Chemical Residue Analysis." 31st Annual Meeting, Hamilton, Ont., May, 1988.
- (7) "Annual Discussion on Sediment Toxicity." 31st Annual Meeting, May, 1988, Hamilton, Ont., May, 1988.
- (8) "Bioassessment of Freshwater Dredged Sediments". With R. A. Hoke. 32nd Annual Meeting, Madison, WI., May, 1989. *Invited*.
- (9) "Microtox^R and *Daphnia magna* as Indicators of Sediment Toxicity in the Lower Fox River and Green Bay, Wisconsin." With R. A. Hoke. 32nd Annual Meeting, Madison, WI., May, 1989. *Invited*.
- (10) "Bioassessment of Complex Mixtures of Polyhalogenated Hydrocarbons in Fish, Fish-eating Birds and Furbearers of the Great Lakes." With P. D. Jones, J. L. Newsted, D. E. Tillitt, J. P. Ludwig, M. E. Ludwig, T. Kubiak, D. Best and G. T. Ankley. 33rd Annual Conference, Windsor Ontario, May 1990. *Invited*.

- (11) "Toxicity in Eggs of Great Lakes Colonial Waterbirds 1986-1989." With J. P. Ludwig, M. E. Ludwig, H. J. Auman, P. D. Jones, D. E. Tillitt, J. L. Newsted and D. A. Verbrugge. 33rd Annual Conference, Windsor, Ontario, May 1990.
- (12) "Uptake of Toxic Substances by Newly-hatched Double-crested Cormorant and Herring Gull Chicks at Eight Upper Great Lakes Sites in 1989". With J. P. Ludwig, M. E. Ludwig, H. Kurita, H. J. Auman, P. D. Jones, D. E. Tillitt, J. L. Newsted and D. A. Verbrugge. 33rd Annual Conference, Windsor, Ontario, May 1990.
- (13) "2,3,7,8-TCDD Equivalents in Multiple Trophic Levels at Thunder Bay, Lake Huron, Determined by H-4-IIE Rat Hepatoma Cell Bioassay." With P. D. Jones, D. E. Tillitt, J. L. Newsted, D. A. Verbrugge, N. DeGalan, G. T. Ankley, T. J. Kubiak, D. A. Best, and J. L. Ludwig. 33rd Annual Conference, Windsor, Ontario, May 1990.
- (14) "Mutagenicity of Sediments from the Grand Calumet River, IN: Comparison of Mutatox^R and Ames Assays". With R. A. Hoke, A. E. Maccubbin and J. Tung. 34th Annual Meeting, Buffalo, NY. May, 1991.
- (15) "Coplanar Polychlorinated Biphenyl (PCB) Congeners and TCDD-equivalents in Fillets of Lake Michigan Chinook Salmon: Implications for Fish Consumption Advisories". With L. L. Williams. 34th Annual Meeting, Buffalo, NY. June 2-6, 1991.
- (16) "Development of Toxic Equivalency Factors for Planar, Halogenated Hydrocarbons in Rainbow Trout (*Oncorhynchus mykiss*). With J. L. Newsted, P. D. Jones, R. Crawford and J. Gooch. 34th Annual Meeting, Buffalo, NY. June 2-6, 1991.
- (17) "Calibration of *Daphnia magna* "Fluorotox" and *Hyalella azteca* Bioassays to the 48 hr *Daphnia magna* Protocol Using Copper-Spiked Sediments and Sediments Contaminated by Copper Mining Activities. With J. A. Kubitz, E.E. Leweke-Klein, J. M. Besser. 36th Annual Meeting, De Pere, WS. June 6-10, 1993.
- (18) "Coplanar Polychlorinated Biphenyls (PCB's), TCDD - Equivalents (TEQ's) and Productivity in Eggs of Double - Crested Cormorants". With L.L. Williams, J.M. Larson, W.H. Karasov, L. Sileo and K.L. Stromberg. 36th Annual Meeting, DePere, WS. June 6-10, 1993.
- (19) "Reproductive Performance of Mink Fed Saginaw Bay Carp: Dose Response Relationships for Total PCB's, Dioxin - Like Congeners, and Dioxin Equivalents". With T.J. Kubiak, D.E. Tillitt, R.W. Gale, S.N. Heaton, S.J. Bursian, and R.J. Aulerich. 36th Annual Meeting, De Pere, WS. June 6-10-, 1993.
- (20) "The caffeine breath test: a method to measure cytochrome P45-IA1 activity in birds." With L.A. Lindley and T.E. Bryant. 36th Annual Meeting, De Perve, WS, June 6-10, 1993.

- (21) "Penetration of Ultraviolet Radiation into Lake Michigan and Effects on the Primary Production of Natural Phytoplankton Assemblages" With W. Gala. 37th Annual Meeting, Windsor, Ontario, June 7-11, 1994.
- (22) "Development of *in vitro* assays for assessing the immuno-modulatory effects of environmental contaminants on Great Lakes salmon." With G.E. Noguchi and R.W. Bull, 37th annual meeting, Windsor, Ontario, June 7-11, 1994.
- (23) "The Caffeine Breath Test: A Novel Approach to Monitoring Cytochrome P450-1A Activity in Birds". With L. Feyk, 37th annual meeting, Windsor, Ontario, June 7-11, 1994.
- (24) "Effects of Dredging on the Sediment Quality of Elizabeth Park Marina and Trenton Channel, Detroit River", With J.M. Besser, J.A. Kubitz, S. Benzie, A. Ostaszewski and R. Kreis, 37th annual meeting, Windsor, Ontario, June 7-11, 1994.
- (25) "A Multi-Generational Study of the Effects of Consumption of Great Lakes Fish on Mink Reproduction" 37th annual meeting, Windsor, Ontario, June 7-11, 1994.
- (26) "Use of *In vitro* Assays for Assessing the Immunomodulatory Effects of Polychlorinated Biphenyls on Chinook Salmon", with G. E. Noguchi, and R.W. Bull. To: 38th annual meeting, East Lansing, Michigan, May 28- June 1, 1995.
- (27) "Developmental deformities in double-crested cormorant and Caspian Tern chicks and embryos from the Upper Great Lakes". With J.P. Ludwig, C.L. Summer, D. E. Tillitt, P.D. Jones, H. Kurita-Matsuba, H. Auman, and M.E. Ludwig. To: 38th annual meeting, East Lansing, Michigan, May 28- June 1, 1995.
- (28) "*In Vitro* Induction of Ethoxyresorufin O-deethylase (EROD) Activity and Porphorins by Halogenated Aromatic Hydrocarbons (HAHs) in Hepatocytes of Great Lakes Fish-eating Birds". With J.T. Sanderson. To: 39th annual meeting, Toronto, Ontario, Canada, May 26- May 30, 1996.

* **International Association for Sediment Water Science:**

- (1) "Sediment Toxicity Assessments: Whole Sediments Versus Pore Waters". With R. A. Hoke. 5th International Symposium on the Interactions Between Sediments and Water. Uppsala, Sweden. August, 1990.
- (2) "Standardization of Sediment Bioassay Methods: Rationale for Development of a *Hyallela azteca* Bioassay". With J. A. Kubitz and J. M. Besser. International Symposium on Sediment Quality Assessment, Göteborg, Sweden, August 22-25, 1994.
- (3) "Assessment of Metal Bioavailability in Contaminated Sediments Using a Bioaccumulation and Growth Assay with *Chironomus tentans*" With J. M. Besser, J. A. Kubitz and C.A. Ingersoll. International Symposium on Sediment Quality Assessment, Göteborg, Sweden, August 22-25, 1994.

* **International Association for Water Research:**

- (1) "Uptake of Americium-241 by Algae and Bacteria." With D. Paine. 8th International Conference of the International Association on Water Pollution Research, Sydney, Australia. 1976.

* **International Humic Substances Society:**

- (1) "Conditional Stability Constants for Copper Complexation by Dissolved Organic Carbon in the Southeastern United States." With J. J. Alberts and D. W. Evans. Second International Congress, Birmingham, England, July, 1984.
- (2) "A Comparison of Scatchard Analysis and a Gaussian Distribution Model to Determine a Conditional Stability Constant for the Uranyl Ion - Humic Complex." With R. A. Geiger, J. J. Alberts and N. R. Keven. Second International Congress, Birmingham, England, July, 1984.

* **International Society for Ecotoxicology and Environmental Safety:** 1985-Present.

- 10th Biennial International Symposium on Chemical and Toxicology Aspects of Environmental Quality. November, 1987, Munich, Germany.

* **International Society of Theoretical and Applied Limnology:**

- Workshop on Biomonitoring the Environment. Hamilton, NZ., February, 1987.
- (1) "Trace Metal Transport by Particulates and Organic Carbon in Two South Carolina Streams." 20th Congress. Copenhagen, Denmark. 1977.
 - (2) "Phospho-adenylate Concentrations and Energy Charge as Measures of Responses of two Freshwater Crustaceans to Stressors." 21st Congress. Kyoto, Japan, August, 1980.
 - (3) "Cadmium Partitioning and Related Effects in Parasitized and Non-parasitized Mosquito fish (*Gambusia affinis*: Poeciliidae)." With D. Smith. 22nd Congress, Lyon, France, August, 1983.
 - (4) "Clinical Measures of Toxicant-induced Stress in Aquatic Organisms." 23rd Congress, Hamilton, New Zealand, February, 1987. *Invited. Special Symposium.*
 - (5) "Ecotoxicology in Europe and North America". With A. Sördegren, P. D. Hansen, P. Calow, R. Baudo. 24th Congress, Munich, Germany, August, 1989.
 - (6) "Assessment of Contaminated Sediments". With R. A. Hoke, C. J. Rosiu, K. G. Grzyb and G. T. Ankley. 24th Congress, Munich, Germany, August, 1989. *Invited.*

* **International Society of Regulatory Toxicology and Pharmacology**

- (1) "The Impact of Endocrine-Mediated Effects on Wildlife". Assessing the Risks of Adverse Endocrine-Mediated Effects, January 13-14, 1997, Research Triangle Park, NC. *Invited*

* **Michigan Academy of Science Arts and Letters:**

- (1) "Effects of Automobile Exhaust on Forest Litter Invertebrates." With A. L. Edgar. Annual Meeting, E. Lansing, MI, 1971.
- (2) "The Use of Tris-(Hydroxymethyl)-Amino Methane in the Culture and Bioassay of the Green Alga *Scenedesmus obliquus* (Turp) Kutz." With N. R. Kevern. Annual Meeting, E. Lansing, MI, 1974.
- (3) "Colonial Waterbirds and Environmental Contamination in the Great Lakes". With D. E. Tillitt. Annual Meeting, Grand Rapids, MI, 1989.
- (4) "Adaptation of an Unialgal Population to Zooplankton Grazing". With W. Gala and R. Hoke. Annual Meeting, Grand Rapids, MI, 1989.
- (5) "Characterization of Epidermal Growth Factor to the Hepatic Plasma Membranes of the Rainbow Trout (*Salmo gairdneri*)". With J. L. Newsted. Annual Meeting, Grand Rapids, Michigan 1989.
- (6) "An Overview of Methods for Assessing the Effects of Pollutants on Benthic Invertebrates". With R. A. Hoke. Annual Meeting, Albion, Michigan 1990. *Invited*.

* **Michigan Alliance for Environmental and Outdoor Education.**

- (1) "Bald Eagles in Michigan". Annual Meeting, May 1-3, 1992, Hillsdale, Michigan *Invited*.

* **Michigan Occupational and Environmental Medicine Association.**

- (1) "Concentrations of Synthetic Compounds in and their Effects on Fish-Eating, Colonial Water Birds of the Great Lakes". Annual Conference, June 11-12, Dearborn, Michigan. *Invited, Plenary*

* **Michigan Society for Risk Assessment.**

- (1) "Wildlife Hazard Assessment: A Great Lakes Perspective". With W.W. Bowerman, D.Best, R. Aulerich and S. Bursian. Annual meeting November 21, 1994, Ann Arbor, Michigan

* **Midwest Pollution Control Biologists:**

- (1) "Sediment Toxicity Assessment in the Great Lakes". Annual Meeting, Chicago, IL, April, 1990. *Invited*.

* **New England Estuarine Research Foundation:**

- (1) "Cadmium Toxicity to the Cladoceran *Simocephalus* in Humic vs. Non-humic Fresh Waters." Woods Hole, MA., October, 1976.

* **North American Benthological Society:**

- (1) "Uptake and Depuration Kinetics of a Polycyclic Aromatic Hydrocarbon in *Chironomus riparius*." With S. Gerould, G. Leverssee and P. Landrum. 28th Annual Meeting, Savannah, GA., March, 1980.
- (2) "The Utility of Chironomids as Test Species for Sediment Contaminant Evaluations". With R. A. Hoke. 37th Annual Meeting, Guelph, Ont. Canada, April, 1989. *Invited*.
- (3) "Relationship of Metal Bioaccumulation to Toxicity in Freshwater Invertebrates". With J. Besser, J. Kubitz and C. Ingersoll. 42 Annual meeting, Orlando, Florida, May 1995 *Invited*.
- (4) "Toxicity of Detroit River Sediments to Benthic Invertebrates". With J.A. Kubitz and J.M. Besser, 42 Annual meeting, Orlando, Florida, May 1995 *Invited*.
- (5) "Relationship of Metal Bioaccumulation to Toxicity in Freshwater Invertebrates". With J.M. Besser and C.G. Ingersoll. 43 Annual Meeting, 42 Annual meeting, Orlando, Florida, May 1995. *Invited*.

* **Society of Environmental Toxicology and Chemistry (SETAC):**

- (1) "The Effect of Chronic Cadmium Exposure on Phosphoadenylate Concentrations and Adenylate Energy Charge in Gill and Dorsal Muscle Tissue of Crayfish." With G. W. Dickson and L. A. Briese. Washington, D.C., November, 1980.
- (2) "Assessment of Environmental Exposure to Pollutants using Biochemical Measures." 2nd Annual Meeting, Washington, D. C., November, 1980.
- (3) "Sunlight Induced Toxicity of Anthracene to Daphnids." With P. M. Allred. 4th Annual Meeting, Washington, D. C., November, 1983.
- (4) "The Lysosomal Enzyme Release Assay as a Measure of Cadmium Induced Stress in the Bluegill Sunfish, *Lepomis macrochirus*." With D. J. Versteeg and J. Oris. 4th Annual Meeting, Washington, D. C., November, 1983.
- (5) "Photo-enhanced Toxicity of Anthracene in Bluegill Sunfish." With J. T. Oris and D. J. Versteeg. 4th Annual Meeting, Washington, D. C., November, 1983.

- (6) "Conditional Stability Constants for Copper Complexation by Dissolved Organic Carbon in the Southeastern United States." With J. J. Alberts and D. W. Evans. 5th Annual Meeting, Washington, D. C., November, 1984.
- (7) "Alterations in the Free Amino Acid Pool of *Gammarus pseudolimnaeus* (Amphipoda) as a Sub-lethal Toxic Response to Pentachlorophenol." With R. L. Graney. 5th Annual Meeting, Washington, D. C., November, 1984.
- (8) "Alterations in the Free Amino Acid Pool of freshwater Invertebrates Chronically Exposed to Pentachlorophenol: Potential Application in Laboratory and Field Hazard Assessment." With R. L. Graney. 6th Annual Meeting, St. Louis, MO, November, 1985.
- (9) "Effect of Photoperiod and Concentration on the Light-Mediated Toxicity of Anthracene to Juvenile Bluegill Sunfish." With J. T. Oris. 6th Annual Meeting, St. Louis, MO, November, 1985.
- (10) "Quantitative Structure-Activity Model of Photodynamic Toxicity of PAH to *Daphnia magna*." With J. L. Newsted. 6th Annual Meeting, St. Louis, MO, November, 1985.
- (11) "Effect of Photo-induced Toxicity of PAH to *Daphnia magna* Reproduction." With L. Holst. 7th Annual Meeting, Washington, D. C., November, 1986.
- (12) "Toxicity of Sediments in the Detroit River-1986: Relative Sensitivities of Three Assays." With R. L. Graney, J. L. Newsted, C. J. Rosiu, R. G. Kreis and R. J. Horvath. 8th Annual Meeting, Pensacola, FL. November, 1987.
- (13) "Effect of Chlorpyrifos on Production of the Nile Fish *Tilapia*." With M. M. Shereif, Annual Meeting, Pensacola, FL. Eighth Annual Meeting. November, 1987.
- (14) "Dose-Response Relationships for Benthic Invertebrate Bioassays with Toxic Sediment and Pore Water." With C. J. Rosiu, R. A. Hoke, R. L. Graney and M. G. Henry. 9th Annual Meeting, Washington, D.C., November, 1988.
- (15) "The Future of Sediment Toxicity Assessments: Relevant Answers Require the Appropriate Questions." With R. A. Hoke, G. Ankley and C. J. Rosiu. 9th Annual Meeting, Washington, D.C., November, 1988.
- (16) "Sublethal Effects of the Organophosphorus Insecticide Dursban^R (Chlorpyrifos) on the Nile Fish *Tilapia*." With M. M. Shereif, 9th Annual Meeting, Washington, D.C., November, 1988.
- (17) "PCB Congeners and Rearing Mortality in Lake Michigan Chinook Salmon." With L. L. Williams, 9th Annual Meeting, Washington, D.C., November, 1988.
- (18) "Relative Sensitivities of Four Bioassays of Toxicity of Sediments in the Grand Calumet River, Indiana." With R. A. Hoke, W. R. Gala, K. R. Grzyb and C. J. Rosiu. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.

- (19) "Reproductive Effects in Mink Fed Carp From Saginaw Bay, Michigan." With S. N. Heaton, R. J. Aulerich, S. J. Bursian, D. E. Tillitt, J. A. Render and T. J. Kubiak. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (20) "PCB Congeners and Rearing Mortality in Eggs from Lake Michigan Chinook Salmon." With L. Williams. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (21) "Flow Cytometric Techniques to Assess Toxicity to Algae." With W. R. Gala. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (22) "Comparison of the Toxicity of Sediment Porewater to the Alga, *Selenastrum capricornutum* as Assessed in Acute and Chronic Toxicity Tests." With W. R. Gala and R. A. Hoke. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (23) "Passive Samplers for the Monitoring of Bioavailable Organic Contaminants from Sediments." With K. R. Grzyb. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (24) "Reproductive Implications of Coplanar PCBs in Lake Michigan Chinook Salmon: Determination of Biological Potency with the H-4-II-E Hepatoma Bioassay." With G. T. Ankley and D. E. Tillitt. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (25) "Utilization of the H-4-II-E rat Hepatoma Cell Bioassay in Evaluating the Toxicity of Coplanar PCBs to Colonial, Fish-eating, Waterbirds in the North American Great Lakes." With D. Tillitt, G. T. Ankley, J. Ludwig and T. Kubiak. 10th Annual Meeting, Toronto, Ont., Canada, November, 1989.
- (26) "Bioaccumulation and Biomagnification of Bio-active Organochlorine Contaminants as Determined by Bioassay and Chemical Analysis." With P. D. Jones, G. T. Ankley, T. J. Kubiak, D. A. Best, J. P. Ludwig, M. E. Ludwig, H. Auman, S. Tanabe and N. Yamashita. 11th Annual Meeting, Washington, D.C., November 9-15, 1990.
- (27) "Biochemical Effects of Planar Halogenated Hydrocarbons on Rainbow Trout (*Onchorhynchus mykiss*)." With J. L. Newsted. 11th Annual Meeting, Washington, D.C., November 9-15, 1990.
- (28) "Effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on the hepatic epidermal growth factor receptor of rainbow trout." With J. L. Newsted. 11th Annual Meeting, Washington, D.C., November 9-15, 1990.
- (29) "Comparison of Site-Specific, Bioassay-Based, Sediment Quality Criteria (SQC) to Global, Numerical, Chemistry-Based SQC for Selected Great Lakes Sediments". With D. A. Verbrugge, R. A. Othoutd, R. A. Hoke, J. B. Drake, K. R. Grzyb and D. J. Anderson. 11th Annual Meeting, Washington, D.C., November 9-15, 1990.

- (30) "Levels of Organochlorines in Bald Eagles from the Great Lakes Basin". With W. W. Bowerman. 11th Annual Meeting, Washington, D.C., November 9-15, 1990.
- (31) "Development of Sediment Quality Criteria: Is There Reason in the Rationale?" With R. A. Hoke. 11th Annual Meeting, Washington, D.C. November 11-15, 1990.
- (32) "Potential Confounding Factors in the Assessment of Sediment Pore Water and Effluent Toxicity using Cladocerans. With R. A. Hoke, W. R. Gala, and J. B. Drake. 11th Annual Meeting, Washington, D.C. November 11-15, 1990.
- (33) "Planar, Chlorinated Hydrocarbons in the New Zealand Environment". With P. D. Jones, T. J. Kubiak, D. A. Best and D. Scott. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (34) "Reproductive Effects of Feeding Great Lakes Fish to Laying Hens". With C.L. Summer, R.J. Aulerich, S.J. Bursian, J.A. Render and T.J. Kubiak. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (35) "Reproductive Performance of Mink Fed Saginaw Bay Carp." With S. N. Heaton, R.J. Aulerich, S.J. Bursian, J.A. Render, D.E. Tillitt and T.J. Kubiak. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (36) "Persistent Organochlorines and Embryonic Abnormalities in Three Species of Colonial Waterbirds From the Upper North American Great Lakes." With N. Yamashita, S. Tanabe, T. Iida, R. Tatsukawa, J.P. Ludwig, H. Kuita, M.E. Ludwig, H.J. Auman, T.J. Kubiak, D.A. Best, P.D. Jones and D.E. Tillitt. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (37) "The in Vivo and in Vitro Effect of 2,3,7,8-TCDD on the Epidermal Growth Factor Receptor of Rainbow Trout." With J.L. Newsted. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (38) "Alterations in the Biological Potency of Environmental Planar Chlorinated Hydrocarbons." With P.D. Jones, J.L. Newsted, D.A. Verbrugge, D.E. Tillitt, G.T. Ankley, T.J. Kubiak, D.A. Best, J.P. Ludwig and M.E. Ludwig. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (39) "Small Volume Bioassay for Assessing the Toxicity of Contaminated Sediments using the Amphipod *Hyalella Azteca*." With J.A. Kubitz. 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (40) "Dioxin-like Toxic Potency in Forster's Tern Eggs from Green Bay, Lake Michigan." 12th Annual Meeting, Seattle, WA. November 3-7, 1991.
- (41) "Toxicity of Sediments and Sediment Pore Waters from the Grand Calumet River-Indiana Harbor, Indiana Area of Concern." With R. A. Hoke and M. J. Zabik. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.

- (42) "Biomarker and Health, Status Technique for using Bald Eagles as Bio-indicator Species in the Great Lakes." With W.W. Bowerman,IV and J.G. Sikarskie. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (43) "Use of Population Genetics to Determine Adult Turnover Rates in the Great Lakes Bald Eagles." With W. W. Bowerman, IV, R. B. Crawford, D.C. Morizot and R.E. Schmidt. 13th Annual Meeting , Cincinnati, Ohio, Nov. 8-12, 1992.
- (44) "PCBs in Plasma of Known-Age Caspian Terns Nesting in the Upper Great Lakes." With M.A. Mora, D. Verbrugge, C.M. Lewis and S.A. Toles. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (45) "Partitioning Behavior of Non-polar Organic Compounds in Sediments form a Great Lakes Area of Concern." With R.A. Hoke and M. J. Zabik. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (46) "Uptake of Planar PCBs and 2,3,7,8-substituted PCDFs and PCDDs by Birds Nesting in the Lower Fox River/Green Bay, WI." With G.T Ankley, G.J. Niemi, K.B. Lodge, H.J. Harris, K.L. Beaver, P.D. Jones and D.E. Tillitt. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (47) "Hepatic Glutathione Metabolism and Oxidative Stress in Mink fed Saginaw Bay Carp (SBC)." With D.F. Hoffman, L. J. Le Captain, D. Smith, R. Aulerich and D. Tillitt. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (48) "A Comparison of Water Quality Criteria in the Great Lakes Basin Based on Human and Wildlife Health" with J.P. Ludwig, H.J. Auman, C.L. Summer, and M. Gilbertson. 13th Annual Meeting, Cincinnati, Ohio, Nov. 8-12, 1992.
- (49) "Organochlorine contaminants and reproductive impairment of bald eagles at Voyagers National Park, Minnesota." With W. W. Bowerman, L. Grim, L. Kallemeyn, D.A. Best, K. Ensor, S. Smith and T.G. Grubb. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (50) "Accumulation and disposition of dietary 2,3,7,8-tetrachlorodibenzo-p-dioxin by rainbow trout." With R. Crawford, P.D. Jones, D.E. Tillitt, G.T. Ankley, J.L. Newsted, L.L. Williams and D.A. Verbrugge. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (51) "Optimizing the experimental design of a sediment toxicity test using the Amphipod *Hyalella azteca*." With J.A. Kubitz and J.M. Besser. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (52) "Structural factors affecting the binding of chlorinated organic contaminants and their hydroxylated derivatives to the estrogen receptor." With V. J. Kramer and W. Helferich. 14th Annual Meeting, November 14-18, 1993, Houston, TX.

- (53) "Decreases in coplanar polychlorinated biphenyls (PCBs) and TCDD-equivalents (TEQs) from 1977 to 1990 in eggs of red-breasted mergansers." With L.L. Williams, G.H. Heinz and K.L. Stromberg. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (54) "Optimization of transfection methods for the RTH-149 fish cell line." With C. Richter, V. Leykam, R. Crawford and M.S. Denison. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (55) "Concentrations of PCBs in water and suspended particulates from the Saginaw River, Michigan." With D.A. Verbrugge, M. Mora, L. L. Williams, B. Crawford, R. Moll, R. Rossman and M. Tuchman. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (56) "The Caffeine breath test: a less invasive method to measure cytochrome P450-IA1 activity in birds." With L.A. Lindley and T. E. Bryant. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (57) "Effects of aerobic and anaerobic incubation on the bioavailability of copper from lake sediments." With J. M. Besser. 14th Annual Meeting, November 14-18, 1993, Houston, TX.
- (58) "Comparative Assessment of the Acute and Chronic Toxicity of Sediment Pore Waters to Daphnids". With R.A. Hoke, and M.J. Zabik. 15th Annual Meeting, November, 1994. Denver, Co.
- (59) "Effects of Sample Holding Time and Manipulation on Toxicity of Sediment Pore Waters and Elutriates". With R.A. Hoke, and M.J. Zabik. 15th Annual Meeting, November, 1994. Denver, CO.
- (60) "Metal Bioavailability in Freshwater Sediments: Influence of Acid-volatile Sulfide and Organic Matter" With J.M. Besser and C.A. Ingersoll. 15th Annual Meeting, November, 1994. Denver, CO.
- (61) "Mink Biomagnification Factors from Food to Adult Livers Fed Saginaw Bay Carp". With T. J. Kubiak, S.N. Heaton, S.J. Bursian, D. E. Tillitt J. A. Render and R. J. Aulerich. 15th Annual Meeting, November, 1994. Denver, Co.
- (62) "Mink Liver TEQs and Reproductive NOAEL Resulting from Dietary Exposure to Fish from Saginaw Bay". With D. E. Tillitt, R.W. Gale, P.H. Peterman, T. J. Kubiak, S.N. Heaton, S.J. Bursian and R. J. Aulerich. 15th Annual Meeting, November, 1994. Denver, Co.
- (62) "Use, Limitations and Validation of Distributions of Computer Models Estimated Pesticide Concentrations in Surface Waters" With H. Nelson, D. Laskowski and A. Barefoot. 15th Annual Meeting, November, 1994. Denver, Co.

- (63) “Ethoxyresorufin-o-deethylase Induction of Polychlorinated Diphenyl Ethers in H4IIE Cells” With J. Koisitnen, T.J. Sanderson, T. Nevalainen and J. Paasivirta. 16th Annual Meeting, November 5-9, 1995, Vancouver, British Columbia, Canada.
- (64) “Bioaccumulation of Selenium from Coal Fly Ash and Associated Environmental Hazards in a Freshwater Fish Community”. With J.M. Besser, R. Brown, T. Herdt and G. Dawson. 16th Annual Meeting, November 5-9, 1995, Vancouver, British Columbia, Canada.
- (65) “Comparison of a receptor-mediated luciferase and ethoxyresorufin-o-deethylase expression in H4IIE Cells: Their use as a Bioassay Tool”. With J.T. Sanderson, K.L. Froese, J.M.M.J.G. Aarts and A. Brouwer. 16th Annual Meeting, November 5-9, 1995, Vancouver, British Columbia, Canada.
- (66) “Total PCBs, TCDD-EQs in Eggs: Reproductive Hazards to North Pacific Albatrosses”. With J.P. Ludwig, H.J. Auman, C.L. Summer, J.M. DeDoes, D.A. Verbruggee and P.D. Jones. 16th Annual Meeting, November 5-9, 1995, Vancouver, British Columbia, Canada.
- (67) “The Effects of an Extract Derived from Contaminated Double-Crested Cormorant Eggs on the Developing Chicken”. With D.C. Powel, R.J. Aulerich, K. Stronborg, D.E. Tillitt, J.C. Meadows and S.J. Bursian. 16th Annual Meeting, November 5-9, 1995, Vancouver, British Columbia, Canada.
- (68) “Dioxin-like Toxicity in Great Lakes Fish-Eating Birds: Uncertainties in Hazard Assessment”. With D.E. Tillitt, T.J. Kubiak and J.P. Ludwig. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.
- (69) “Hydroxylated PCB Metabolites are Anti-Estrogenic in a Stably Transfected Human Breast Adenocarcinoma (MCF-7) Cell Line”. With V.J. Kramer, W.T. Helferisch, Å. Bergman and E. Klasson-Wehler. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC
- (70) “Assessing the Direct Effects of Halogenated Aromatic Hydrocarbons on Salmon Immune Responses”. With G.E. Noguchi and R.W. Bull. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.
- (71) “Reduction in Ah Receptor Mediated Activity Due to Anaerobic Microbial Dechlorination of PCB Mixtures”. With M.A. Mousa, J. Quensen, S. Boyd, J.T. Sanderson and K.L. Froese. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.
- (72) “Effects of Polyhalogenated Environmental Contaminants on Double-Crested Cormorant Embryos Exposed Prior to Incubation”. With D.C. Powell, R.J. Aulerich, J.C. Meadows, D.E. Tillitt, J.P. Powell, J.C. Restum, K.L. Stromborg and S. Bursian. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.

- (73) “Relationship Between Receptor Binding and Receptor Mediated Gene Expression for Several Potential Estrogen Agonists”. With D.L. Villeneuve and V.J. Kramer. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.
- (74) “Pathological Effects of 17 β -Estradiol in the Reproductive System of the Fathead Minnow (*Pimephales promelas*)”. With S. Miles-Richardson, S. Fitzgerald, J. Render and V. Kramer. To: 17th Annual Meeting, November 17-22, 1996, Washington, DC.
- (75) “Butyltin Residues in Water Birds from Inland and Coastal Waters of North America” With K. Kannan, K. Senthilkumar, J. Elliot, L. Feyk and D. Verbrugge. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (76) “Accumulation of Polychlorinated Biphenyls, Polychlorinated Dibenzo-p-dioxins and Dibenzodioxins in Biota Collected at a Superfund Site Contaminated with Aroclor 1268”. With K. Kannan, H. Nakata, R. Stafford, G. Mason and S. Tanabe. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (77) “Distribution of Total Mercury and Methylmercury in Water, Sediment and Fish From South Florida Estuaries”. With K. Kannan, R. Smith, R.F. Lee and H.L. Windom. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (78) “Risks of Chlorpyrifos in the Aquatic Environment: I Problem Formulation and Stressor Characterization”. With K.S. Solomon, J.R. Coats, J.M. Giddings, K.M. Dixon and E.E. Kenaga. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (79) “Risks of Chlorpyrifos in the Aquatic Environment: II Probabilistic Characterization of Exposure and Toxicity in Aquatic Organisms”. With K.S. Solomon, J.M. Giddings, J.R. Coats, K.R. Dixon and E.E. Kenaga. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (80) “Risks of Chlorpyrifos in the Aquatic Environment: III Microcosms, Mesocosms, Models and Evaluation of Ecological Significance “. With J.M. Giddings, J.R. Coats, K.R. Dixon, E.E. Kenaga and K.R. Solomon. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (81) “Bioassay Analysis of Pulp Mill-Related Samples for Estrogenic and Dioxin-Like Compounds.” With A. Blankenship, J. Koistinen, K. Tukia, R. Soimasuo and Aimo Oikari. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (82) “Evaluation of Reproductive Endpoints in Goldfish Exposed *In Situ* to Waste Water Treatment Plant Effluents in South Central Michigan. With E. M. Snyder, K. Nichols, S. Pierens and S. Snyder”. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (83) “Ecological Risk Assessment of Chlorpyrifos Exposure in Wildlife in Midwestern Corn Agroecosystems: A Probabilistic Approach”. With R. Kendall, L. Best, J. Coats, K

- Dickson, H, Hooper, E. Kenaga, S. McMurry and K. Solomon. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (84) “Approaches for Assessing Relative Estrogenic Potency of Environmental Samples Based on *In Vitro* Bioassay Results” With D. Villeneuve, S. Snyder and A. Blankenship. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (85) “Catalytic and Immunochemical Properties of cytochrome P450-1A in Avian Species Treated with β -naphthaflavone or Isosafrole”. With L. Feyk and J. Stegeman. “To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (86) “Toxicant Identification and Evaluation (TIE) of Endocrine Disrupters in Aqueous Mixtures”. With S. Snyder, D. Villeneuve, K. Kannan and E. Snyder. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (87) “Assessment off Chronic and Acute Toxicity of Polydimethylsiloxane (PDMS) to *Chironomus tentans* and *Hyallorella azteca*.” With K.S. Henry. To: 18th Annual Meeting, November 16-20, 1997, San Francisco, CA.
- (88) “Development of a Novel Injury Quantification Approach for Organisms Exposed to Ah-Active Compounds: A case Study of the Fox River and Green Bay, Wisconsin”. With T.J. Iannuzzi, D.F. Ludwig, M.L., Moore, G.N. Bingham, A.L. Blankenship and K. Kannan. “19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (89) “Evaluating a Probabilistic Approach to Hazard Assessment for PCBs and Ecological Receptors for Natural Resource Injury Assessments”. With D.F. Ludwig, T.J. Iannuzzi and M.L. Moore. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (90) “Laboratory and Field Analyses of the Potential Toxicity of Polydimethylsiloxane (PDMS) to Benthic Invertebrates”. With K.S. Henry, A. Nocentini, W. Wieland, D. Rossi, M. Beltrami and R. Baudo. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (91) “Accumulation of Persistent Organic Pollutants in the Eggs of Southern Ocean Migratory Albatrosses.” With P.D. Jones, C.J.R. Robertson and K. Kannan. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (92) “Risk Assessment for Dioxin Equivalents in Fish-Eating Birds of Galveston Bay, TX”. With S.L. Cholger-Blust, A.L. Blankenship, K. Kannan, D. Frank M. Mora, J. Sericano and S. Wainwright. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (93) “Polychlorinated Naphthalenes (PCN) in Soil, Sediment and Biota Collected Near a Former Chlor Alkali Plant in Coastal Georgia. With K. Kannan, A.L. Blankenship and T. Imagawa”. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.

- (94) "Occurance of Butyltin Compounds in River Otters Collected from Riverine and Estuarine Areas in Washington and Oregon States". With K. Kannan, K. Senthilkumar, R.A. Grove and C. Henny. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (95) "Contamination by Organochlorine Pesticides and Polychlorinated Biphenyls in Sea Otters (*Enhydra lutris nereis*) Found Stranded Along Coastal California)". With H. Nakata, K.Kannan, J. Li, N. Thomas and S. Tanabe. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (96) "*In vitro* Bioassays in the Assessment of Ah-Receptor- and Estrogen Receptor-Mediated Activity in Water". With K.T. Lee, D. Villeneuve, K.Kannan and C.H. Koe. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (97) "Bioassays to Validate Diets for their Use in Aquatic Toxicological Research." With K. Kemler, C.A. Duda, A.L. Blankenship, S.A. Villalobos, K. Kannan and D.E. Hinton. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (98) "Relative Toxicity of Polychlorinated Naphthalenes (PCNs) to Medaka After *In Ovo* Wxposure: Early and Partial Life Cycle Assessments". With S.D. Pastva, S.A. Villalobos, A.L. Blankenship, K. Kannan, D.M. Papoulias, J. Meadows and D.E. Tillitt. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (99) "Species-Specific Recombinant Cell Bioassays: Differences in Sensitivity to Complex Mixtures of Halogenated Aromatic Hydrocarbons (HAHs)". With D.L. Villaneuve, K. Staffova and K. Kannan. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (100) "Butyltins in Fishes and Sediments of the Southern Baltic Sea". With C.A. Duda, K. Senthilkumar, D.L. Villineuve, K. Kannan and J. Falandysz. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (101) "Accumulation of Butyltin Residues in Southern Sea Otters Found Dead Along Coastal California". With K. Kannan, K.S. Guruge, N.J. Thomas, and S. Tanabe. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (102) "Methods for Determining Estradiol and Ethinylestradiol Concentrations in Water Samples". With S.A. Snyder, T.L. Keith, E.M. Snyder, and K. Kannan. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (103) "Relative Potencies of Halowax Mixtures and Individual Polychlorinated Naphthalenes in H44IIE-Luciferase Cells". With A.L. Blankenship, K. Kannan, S.A. Villalobos and J. Falandysz. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.
- (104) "Interaction of Tributyltin with 3,3',4,4',5-Pentachlorobiphenyl-Induced Ethoxyresorufin-o-deethylase (EROD) Activity in Rat Hepatoma Cells". With K.

Kannan, D.A. Villeneuve and A.L. Blankenship. 19th Annual meeting, November 15-19, 1998, Charlotte, North Carolina.

- (105) “The Use of a Vitelogenin ELISA to Measure the Effects of Estrogenic Substances on Laboratory Fishes”. With P.D. Jones, S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, S.A. Villalobos, and D.L. Villeneuve. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (106) “Accumulation of PCBs in Southern Ocean Pilot Whales (*Globicephala melas*) from New Zealand Stranding Events”. With C. Schröder, P.J. Day, and P.D. Jones. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (107) “Analysis of Aroclor Mixtures and Polychlorinated Biphenyl (PCB) Congeners in Fish Tissue Samples from the Lower Fox River and Green Bay, Wisconsin: Comparative Results and Trends”. With T.J. Iannuzzi, D.F. Ludwig and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (108) “A Survey of Chemical Residues in Water, Sediment and Green Frogs (*Rana clamitans*) from Southwestern Michigan”. With C.A. Duda, K. Kannan, D.L. Villeneuve, C.L. Summer and C. Mehne. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (109) “Determination of Estrogen-like Activities in Extracts of Effluents from Sewage-treatment Plants, River Water, Seawater and Sediments from Tokyo Bay Using MCF-7 Human Breast Cancer Cells”. With S. Hashimoto, A. Horiuchi, N. Yamashita, T. Yoshimoto, M. Nakao, H. Omura and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (110) “Toxicity Reference Values for the Toxic Effects of Polychlorinated Biphenyls to Aquatic Mammals”. With K. Kannan, A.L. Blankenship and P.D. Jones. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (111) “Determination of Estrogenic Activity in the Tama River by in vitro Reporter Gene Assay”. With S. Masunaga, T. Itazawa, T. Furuichi, J. Nakanishi, D.L. Villeneuve and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (112) “A Method for Determining Bisphenol-A-Concentrations in Blood Samples”. With K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (113) “Occurrence of Butyltin Compounds in Human Blood”. With K. Kannan and K. Senthilkumar. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (114) “Bioaccumulation of Polychlorinated Biphenyls and Organochlorine Pesticides in Ganges River Dolphins from India”. With K. Senthilkumar, K. Kannan, R.K. Sinha and

- S. Tanabe. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (115) “Isomer-Specific Patterns and Toxic Assessment of Polychlorinated Biphenyls in Resident and Migrant Birds and Bat Collected from South India”. With K. Senthilkumar, M. Watanabe, K. Kannan, A.N. Subramanian, and S. Tanabe. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (116) “Polychlorinated dibenzo-p-dioxins (PCDDs), Dibenzofurans (PCDFs), Biphenyls (PCBs) and Organochlorine Pesticides in Yellow-blotched Map Turtle from the PascagoulanRiver Basin in Mississippi, USA”. With K. Kannan, M. Ueda, J.A. Shelby, M.T. Mendonca, M. Kawano, M. Matsuda and T. Wakimoto. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (117) “Studies on the Mechanism of TCDD-Induced Deformities and Embryo Lethality in Birds”. With A. Blankenship, K. Staffova, M. Nie, K. Kemler, A. Villalobos, D. Powell and S. Bursian. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (118) “SCRAM: A Scoring and Ranking System for Persistent, Bioaccumulative, and Toxic Substances for the North American Great Lakes”. With E.M. Snyder, S. A. Snyder, S.A. Blonde, G.K. Hurlburt, C.L. Summer, R.R. Mitchell, and D.M. Bush. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (119) “Distribution of Trace Organic Contaminants in Sediment from Detroit and Rouge Rivers, Michigan”. With K. Kannan, N. Yamashita, J. Kober, A. Ostaszewski and C. Summer. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (120) “Distribution of PCBs, Organochlorine Pesticides and PAHs in ASediments from Lake Orta, Italy”. With K.S. Henry, K. Kannan, R. Baudo, D Rossi and M. Beltrami.. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (121) “Quantification of Nonylphenol Ethoxylates from Fish Tissue in Michigan, USA”. With T.L. Keith and S.A. Snyder. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (122) “Bioanalytical and Instrumental Analyses of Polychlorinated Biphenyls and Organochlorine Pesticides in Blue Mussels, *Mytilus spp.*, from Korean Coastal Waters”. With W.Y. Hu, J.S. Khim, K. Kannan, D.L. Villeneuve, S.G. Kang, K.J. Song, and C.H. Koh. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (123) “Reliable Method for Determining Concentrations of Nonylphenol and Lower Oligomer Nonylphenol Ethoxylates in Fish Tissues”. With S.A. Snyder, T.L. Keith, C.G. Naylor, C.A. Staples and J. B. Williams. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.

- (124) “Alkylphenols, Polycyclic Aromatic Hydrocarbons (PAHs) and Organochlorines in Sediment from Lake Shiwa, Korea: Instrumental and Bioanalytical Characterization”. With J.S. Khim, D.L. Villeneuve, K. Kannan, K.T. Lee, S.A. Snyder and C.H. Koh. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (125) “Characterization and Distribution of Trace Organic Contaminants in Sediment from Masan Bay, Korea: 1. Instrumental Analysis”. With J.S. Khim, D.L. Villeneuve, K. Kannan and C.H. Koh. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (126) “Characterization and Distribution of Trace organic Contaminants in Sediment from Masan Bay, Korea:2 *In Vitro* Gene Expression Assays”. With J.S. Khim, D.L. Villeneuve, K. Kannan and C.H. Koh. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (127) “Relative Potency Estimates from Non-Ideal *In Vitro* Bioassay Results”. With D.L. Villeneuve, J.S. Khim and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (128) “Response of PLHC-1 and H4IIE-luc *In Vitro* Bioassays to Complex Mixtures of PCNs, PCBs, and PAHs”. With D.L. Villeneuve, J.S. Khim and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (129) “Exposure of Fathead Minnow (*Pimephales promelas*) and African Clawed Frog (*Xenopus laevis*) Embryos to Bis-4-chlorophenyl-sulfone”. With K. Kemler and S.A. Villalobos. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (130) “Effects of Bisphenol-A on the Embryonic Stages of Medaka (*Oryzias latipes*)”. With S.D. Pastva, S.A. Villalobos and K. Kannan. To: 20th Annual Meeting, November 14-18, 1999, Philadelphia, Pennsylvania.
- (131) “Vertical Profiles of Dioxin-like and Estrogenic Activities Associated with a Sediment Core from Tokyo Bay, Japan”. With: K. Kannan, D. Villeneuve, N. Yamashita, T. Imigawa, S. Hashimoto and A. Miyazaki. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (132) “Trace Organic Contaminants in Environmental Samples from Ulsan Bay and Its Vicinity, Korea”. With: J-S. Khim, K. Lee, K. Kannan, D. Villeneuve and C. Koe. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (133) “Measurement of the Effects of Environmental Contaminants on Cell Membrane Fluidity by Flow Cytometry”. With: W. Hu, L. King and P.D. Jones. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.

- (134) “In Vitro Bioassay Analysis of Dioxin-Like and Estrogenic Activities in Environmental Samples from Ulsan Bay and It’s Vicinity, Korea”. With: J.-S. Khim, K. Lee, K. Kannan, D.L. Villeneuve and C. Koh. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (135) “Horizontal and Vertical Distribution of Estrogenic Potencies, Nonylphenol and Bisphenol A in Sediment Samples from Tokyo Bay, Japan”. With: Hourichi, A., A. Nakashima, H. Takada, T. Yoshimoto, M. Nakao, H. Ohmura, N. Yamashita and K. Kannan. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (136) “Assessment of Estrogenic Potency and Binding Affinity to Estrogen Receptors in Each Enantiomer of α -HCH and Other HCH Isomers”. With: S. Hashimoto, N. Yamashita, T. Yoshimoto, M. Nakao, H. Ohmura and K. Kannan. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (137) “Aromatase Induction in Medaka (*Oryzias latipes*) After Treatment with Atrazine”. With: T. Celius, M. Heneweer. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (138) “Effects at Two Life Stages After *in ovo* Exposure of Medaka to *o,p'*-DDE”. With: D.M. Papoulious, S.A. Villalobos, D.E. Tillitt and D.B. Noltie. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (139) “Effects of Waterborne Exposure to 4-nonylphenol on Plasma Sex Steroid and Vitellogenin Concentrations in Sexually Mature Male Carp”. With: D.L. Villeneuve, S.A. Villalobos, T.L. Keith, E.M. Snyder and S.D. Fitzgerald. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (140) “Biological Monitoring of Planar PCDD/Fs and PCBs as Exposure Indicators of Potential Environmental Contamination”. With: S. Kennedy, G. Henningsen, S. Skipper, R. Roy, M. Macrander, P.D. Jones, I. Nisbit and D. Regan. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (141) “Relative Potency of Individual Polycyclic Aromatic Hydrocarbons to Induce Dioxin-Like and Estrogenic Responses in Mammalian and Fish *in vitro* Bioassays”. With: J. Kang, D.L. Villeneuve, J.S. Khim, K. Kannan and C. Koh. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (142) “Concentrations and Profiles of Polychlorinated Naphthalene Congeners in Eighteen Polychlorinated Biphenyl Preparations”. With: K. Kannan, N. Yamashita, M. Imigawa and A. Miyazaki. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (143) “Polychlorinated Naphthalenes and Polychlorinated Biphenyls in Fishes from Michigan Waters, Including the Great Lakes”. With: K. Kannan, N. Yamashita, T. Imigawa, J. Khim, R. Day, and C. Summer. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.

- (144) “Polychlorinated- Naphthalenes, -Dibenzo-*p*-dioxins and -Biphenyls in Herring Gulls and Cormorants from Michigan Waters”. With: K. Kannan, K. Hilscherova, T. Imigawa, N. Yamashita and L. Williams. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (145) “Polychlorinated Naphthalenes (PCNs) and Polychlorinated Biphenyls (PCBs) in Marine Species Including Polar Bear and Weddell Seals from Polar Regions”. With: K. Kannan, C. Simonetta, T. Imigawa, T. Evans and S. Focardi. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (146) “Relative Potencies of Individual Polychlorinated Naphthalenes to Induce Dioxin-Like Responses in Fish and Mammalian *in vitro* Bioassays”. With: D.L. Villeneuve, J.-S. Khim, K. Kannan, J. Falandysz, V.A. Nikiforov and A.L. Blankenship. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (147) “Tetrachlorodibenzo-*p*-dioxin Equivalents (TCDD-EQs) in Tissue Samples from Three Species in the Denver Metropolitan Area”. With: K. Kemler, K. Kannan, P.D. Jones and A.L. Blankenship. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (148) “Aroclors, PCB Congeners, and TCDD-Equivalents: Considerations for Selecting PCB Quantification Approaches for Ecological Risk Assessment “. With: A.L. Blankenship, K. Kannan, P.D. Jones, M. Zwiernik and D. Kay. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (149) “Screening for Endocrine Modulating Chemicals in Lake Mead, Nevada using Caged Adult Common Carp (*Cyprinus carpio*)”. With: E.M. Snyder, S.A. Snyder, K.L. Kelly, T.S. Gross, P.D. Jones, S.D. Fitzgerald, D.L. Villeneuve and S.A. Villalobos. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (150) “Screening for Xenobiotics in the Waters of Lake Mead, Nevada”. With: S.A. Snyder, K.L. Kelly, E.M. Snyder, T.L. Keith, K.S. Zikmund, P.A. Grange and A.H. Sovocool. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (151) “Bioassay Directed Instrumental Analyses for the Identification of Endocrine Modulating Compounds in Water and Wastewaters”. With: S.A. Snyder, E.M. Snyder, K. Kannan and D.L. Villeneuve. To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.
- (132) “Vertical Profile of PCNs, PCDDs, PCDFs, PCBs, PAHs and Alkylphenols in a Sediment Core from Tokyo Bay, Japan”. With: K. Kannan, N. Yamashita, T. Imigawa, D. Villeneuve, S. Hashimoto and A. Miyazaki To: 21th Annual Meeting, November 12-17, 2000, Nashville, Tennessee.

- (133) “Endocrine Disruptor Mechanisms: Beyond Receptor Binding”. With A.L. Blankenship, J.T. Sanderson, M. van den Berg and M. Nie. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland. ***Invited***
- (134) “Perfluorooctanesulfonate in the Environment”. With K. Kannan, P.D. Jones, and K. Hansen. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland. ***Invited***
- (135) “A Global Survey of PFOS”. With K. Kannan, P.D. Jones, and K. Hansen. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland. ***Invited***
- (136) “Polychlorinated Biphenyls, Polycyclic Aromatic Hydrocarbons and Alkylphenols in Sediments from the Odra River and It’s Tributaries, Poland”. With K. Kannan, J.-S. Khim, K. Szymczyk, and J. Falandysz. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (137) “Levels of Dioxins, Furans and PCBs in Humans, Meat, Fish and Wildlife Samples from India”. With S. Kuman, S. Masunaga, K. Kannan, O. Patmasivan, V. Shanmugasundaram and J. Nakanishi. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (138) “Organochlorines and Butyltins in Blubber and Livers of Stranded California Sea Lions, Elephant Seals and Harbor Seals from Coastal California, USA”. With K. Kannan, N. Kajiwara, and S. Tanabe. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (139) “Occurrence of Polychlorinated Dibenzo-*p*-dioxins, Dibenzofurans and Polychlorinated Biphenyls in Wildlife of Antarctic and Arctic Polar Regions”. With S. Kumar, K. Kannan, S. Corsolini, T. Evans, J. Nakanishi and S. Masunaga. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (140) “The Distribution of Contaminants Among Tissues in Mink (*Mustela vison*)”. With C.L. Tansey, W.W. Bowerman, O.E. Baker, K. Kannan, S. Masunaga and S. Kumar. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (141) “Polychlorinated-Napthalenes, -Biphenyls, -Dibenzo-*p*-dioxins and -Dibenzofurans in Bluefin Tuna, Swordfish, Cormorants and Barn Swallows from Italy”. With K. Kannan, S. Corsolini, T. Imigawa and S. Focardi. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (142) “Conduct of a Phase I Toxicity Identification Evaluation (TIE) for Pore Water Extracted from Sediments Collected from the Lower Passaic River, New Jersey”. With M.T. BenKinney, M.G. Eversen, D. Kay, T.J. Iannuzzi and C. Firstenberg. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.

- (143) “Effects of Environmentally Relevant Concentrations of TCDD on Rainbow Trout Reproduction”. With P.D. Jones, K. Kannan, J.L. Newsted, D.E. Tillitt, and L.L. Williams. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (144) “Sources and Distribution of Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans in Masan and Changwon Cities, Korea”. With S.H. Im, K.D. Strause, K.Kannan, M. Matsuda, T. Wakimoto. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (145) “Mink Exposure to PCBs in the Kalamazoo River, MI Superfund Site”. With S.D. Pastva, C.S. Park and M.J. Zwiernik. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (146) “Nonyl Phenol and Nonylphenol Ethoxylates in Fish, Sediment and Water from the Kalamazoo River, Michigan”. With K. Kannan, T.L. Keith, C.G. Naylor, C.A. Staples and S. Snyder. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (147) “*In vitro* Assessment of Potential Mechanism-Specific Effects of Polybrominated Diphenyl Ethers”. With D.L. Villeneuve and K. Kannan. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (148) “A Method for the Determination of Tetrabromobisphenol A in Sediment”. With K. Kannan, J.-S. Khim and D.L. Villeneuve. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (149) “Characterization of Dioxin-like and Estrogenic Activities in Sediment Samples from Onsan Bay, Korea Using *In Vitro* Bioassay”. With J.-S. Khim, K.Lee, D.L. Villeneuve, K. Kannan and C. Koh. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (150) “A Country-Wide Risk Assessment of Organochlorines in New Zealand”. With P.D. Jones, S.J. Buckland, H.K. Ellis, and S.E. Scobie. To: 22th Annual Meeting, November 11-15, 2001, Baltimore, Maryland.
- (151) “Response of Developing Frogs (*Xenopus laevis*) to Atrazine: Assessment of Gonadal and Larangeal Morphology. With J. A. Carr, A. Gentles, E.E. Smith, W.L. Goldman, R. Kendall, T. S. Gross, K. Solomon and G. van der Kraak. ”To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (152) “Assessment of Risks of PCBs to Mink (*Mustela vison*) at the Kalamazoo River, Michigan”. With S. D. Pastva, A. L. Blankenship, P. W. Bradley, P. D. Jones, K. Kannan, A. Neigh, C. S. Park, K. D. Strause and M. J. Zwiernik. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (153) “Accumulation of PCBs and an Evaluation of Ecological Risk for Shrews and Other Small Mammals at the Kalamazoo River Superfund Site, Michigan”. With A. L. Blankenship, M. J. Ziernik, C. J. Park, R. Holem, G. Klemolin, P. Bradley, A. Neigh, D.

- Kay and K. Kannan. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (154) “Bald Eagle Exposure to PCBs at the Kalamazoo River Superfund Site”. With K. D. Strause, M. J. Zwiernik, C. S. Park, A. L. Blankenship, P. W. Bradley, K. Kannan, D. Kay and R. Holem. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (155) “Great Horned Owl Exposure to Chlorinated Organics at the Kalamazoo River Superfund Site”. With K. D. Strause, C. S. Park, P. Mosley, S. D. Pastva, A. L. Blankenship, P. W. Bradley, K. Kannan and A. Neigh. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (156) “Passerine Productivity and PCB Exposure at the Kalamazoo River Superfund Site, Michigan.” With A. Neigh, M. McCarroll, M. J. Zwiernik, C. S. Park, T. Moss, R. Adams, R. Holem and J. L. Newsted To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (157) “Use of Bald Eagle Data for Environmental Management”. With W. W. Bowerman, D. A. Best and L. L. Williams. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (158) “Exposure Characterization and Responses of Field Exposures of *Xenopus laevis* to Atrazine and Related Triazines in South African Corn Growing Regions.” With L. H. Du Preez, K. R. Solomon, A. M. Jooste, P. J. Jansen van Rensburg, E. E. Smith, J. A. Carr, R. J. Kendall, T. S. Gross and G. nam der Kraak. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (159) “Atrazine Exposure and Reproductive System Abnormalities in Field Collected *Bufo marinus*”. With K. A. McCoy, M. S. Sepulved and T. S. Gross. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (160) “Determination of Potential Effects of 20 Day Exposure of Atrazine on Endocrine Function of Largemouth Bass (*Micropterus salmoides*)”. With T. S. Gross, C. M. Wieser, D. S. Ruesser, J. A. Carr, A. J. Hosmer, R. J. Kendall, E. E. Smith, K. Solomon, G. Van Der Kraak. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (161) “Aromatase Activity in Tissues of Adult *Xenopus laevis* Exposed to Atrazine”. With D. L. Villeneuve, K. K. Coady, M. M. Murphy, M. van der Zee, M. Hecker, P. D. Jones, J. J. Carr, E. E. Smith and G. van der Kraak. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (162) “Effects of Atrazine on Developing *Xenopus laevis*: Potential Endocrine Disruption”. With K. K. Coady, D. L. Villeneuve, M. M. Murphy, M. van der Zee, M. Hecker, P. D. Jones, J. A. Carr, E. E. Smith, G. van der Kraak. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.

- (163) “Effects of Atrazine on Developing *Rana clamitans*”. With K. K. Coady, D. L. Villeneuve, M. M. Murphy, M. van der Zee, M. Hecker, P. D. Jones, J. A. Carr, E. E. Smith and G. van der Kraak. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (164) “Mitogen-Induced Proliferation of Human Lymphocytes Following Exposure to Pharmaceuticals, Fluorinated Organic Compounds, Alkylphenols and Organotins”. With T. Natsu, H. Shoji, H. Nakata and K. Kannan. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (165) “Distributions and Characteristics of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Fish and Shellfish from Korea”. With S-H Im, K. Kannan, M Matsuda and T. Wakimoto. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (166) “Screening for Androgen and Glucuronide Receptor (ant)agonists using MDA-kb2 Cells”. With M. Murphy, D. L. Villeneuve, W. H. Lam and P. D. Jones. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (167) “Assessing Risks to Resident Great Horned Owels in the Kalamazoo River Floodplain: The Exposure Assessment”. With K. D. Strause, M. Zwiernik, P. Mosley, D. L. Villeneuve and A. L. Blankenship. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (168) “Assessing Risks to Resident Bald Eagles in the Kalamazoo River Flood Plain: The Exposure Assessment”. With K. D. Strause, M. J. Zwiernik, A. L. Blankenship, D. L. Villeneuve, C. S. Park, P. W. Bradley, S. T. Pastva, M. A. McCarroll, A. Neigh and P. P. Mosley. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (169) “Dietary Exposures and Body Burdens in Passerines at the Kalamazoo River Superfund Site, Michigan”. With A. M. Neigh, M.A. McCarroll, M. J. Zwiernik, C. S. Park, P. W. Bradley, D. H Kim, R. Adams, K. D. Strause and, S. T Pastva. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (170) “Principal Components Analysis of Dioxins from Rocky Mountain Arsenal and Denver, Colorado”. With P. D. Jones, J. L. Newsted, J. Slocum, G. Henningson, L. Williams and C. Bicher. To: 23rd Annual Meeting, November 16-20, 2002, Salt Lake City, Utah.
- (171) “Evaluation of PCB Congener Patterns and Concentrations in Aquatic and Terrestrial Invertebrates from the Kalamazoo River Superfund Site”. With D.P. Kay, A.M. Neigh, J.L. Newsted, M.J. Zwiernik and P.W. Bradley. To: 24th Annual Meeting, November 9-13, 2003.
- (172) “Plasma Testosterone and Estradiol Concentrations, Aromatase Activities and Gonadal Histology of Ranids in Michigan”. With M.B. Murphy, K.K. Coady, M. Hecker, P.D. Jones, J.P. Carr, J.A. Smith, G. Van der Kraak, K.R. Solomon and R. Kendall. To: 24th Annual Meeting, November 9-13, 2003.

- (173) “An Evaluation of Gonadal Anomalies and Agricultural Exposures for the Cane Toad (*Bufo marinus*) in South Florida”. With: T.S. Gross, J.T. Smith, J.J. Wiebe, M.S. Sepulveda, J.A. Carr, L. Du Preez, R.J. Kendall, K.R. Solomon, E.E. Smith and G. Van der Kraak. To: 24th Annual Meeting, November 9-13, 2003.
- (174) “Identification and Characterization of Genes Responsive to Perfluorinated Sulfonic Acid Exposure using Gene Expression Profiling”. With: W.-Y. Hu, P.D. Jones, J.L. Newsted, and C. Lau. To: 24th Annual Meeting, November 9-13, 2003.
- (175) “Evaluation of Congener-Specific Concentrations of Polychlorinated Biphenyls (PCBs) and Patterns in an Aquatic-Based Food Web at the Kalamazoo River Superfund Site, Michigan”. With A.L. Blankenship, M. Zwiernik, C. Park, R. Holem, P.W. Bradley, A. Neigh and P. Kay. To: 24th Annual Meeting, November 9-13, 2003.
- (176) “An Examination of Bald Eagles PCB Exposure on the Kalamazoo River, MI based on site-specific and regional-specific exposure profiles”. With: M.J. Zwiernik, K.D. Strause, P.W. Bradley, P.D. Jones, D.P. Kay, and C.S. Park. To: 24th Annual Meeting, November 9-13, 2003.
- (177) “Wild Mink Exposed to PCBs in the Environment Exhibit Mandibular and Maxillary Hyperproliferation of Squamous Epithelium”. With: K.J. Becket, S.D. Pastva, A.L. Blankenship, M.J. Zwiernik and S.J. Bursian. To: 24th Annual Meeting, November 9-13, 2003.
- (178) “Megaloptera as a Representative Benthic Invertebrate for Worst Case Scenario Screening Level Exposure Estimates”. With C.S. Park, M.J. Zwiernik, D.P. Kay and P.W. Bradley. To: 24th Annual Meeting, November 9-13, 2003.
- (179) “Binding of Perfluorinated Chemicals to Serum Proteins”. With P.D. Jones, W.Y. Hu, W. De Coen and J.L. Newsted. To: 24th Annual Meeting, November 9-13, 2003.
- (180) “Gonadal Responses of *Xenopus laevis* Larvae Exposed to Atrazine in Microcosms.” With: L.H. Du Preez, A.M. Jooste, G.J. Everson and K.R. Solomon. To: 24th Annual Meeting, November 9-13, 2003.
- (181) “Steriology: Assessment of Gonadal Function in *Xenopus laevis* From Corn-Growing Areas of South Africa”. With E.E. Smith, L. Du Preez, K.R. Solomon, A.B. Gentles, J.A. Carr and R.J. Kendall. To: 24th Annual Meeting, November 9-13, 2003.
- (182) “Effects of Atrazine on Adult *Xenopus laevis* in the Wild and the Laboratory: No Evidence for an Aromatase Based Mechanism”. With M. Hecker, D.L. Villeneuve, L. Du Preez, K.K. Coady, M.B. Murphy, P.D. Jones and K.R. Solomon. To: 24th Annual Meeting, November 9-13, 2003.

- (183) “Principal Component Analysis of PCB Congener Profiles in Passerines and Their Diet”. With A. Neigh, D.P. Kay, M.J. Zwiernik, A.L. Blankenship, M. MacCarroll, C. Rupert, P.W. Bradley and C. Park. To: 24th Annual Meeting, November 9-13, 2003.
- (184) “PCB Congener Pattern Differences and Biomagnification Factors in Mink (*Mustela vison*) and Select Prey Items Collected from the Kalamazoo River, Michigan”. With S.D. Pastva, A.L. Blankenship, P.W. Bradley, P.D. Jones, D.P. Kay, A.M. Neigh, C.S. Park, K.D. Strause, and M.J. Zwiernik. To: 24th Annual Meeting, November 9-13, 2003.
- (185) “Bioanalytical Techniques for Screening for Total Toxic Potential of Complex Mixtures”. To: 24th Annual Meeting, November 9-13, 2003.
- (186) “Plasma to Egg Conversion Factor for Nondestructive Contaminant Exposure Assessment/Long-term Monitoring of Raptor Populations”. With K.D. Strause, M.J. Zwiernik, D.P. Kay, A.L. Blankenship, W.P. Bradley, P.P. Mosley, C.S. Park and S.K. Im. To: 24th Annual Meeting, November 9-13, 2003.
- (187) “Instrumental and Bioanalytical Characterization of Trace Organic Contaminants in Sediments from the Omuta River, Japan”. With: H. Nakata, H. Shoji, K. Kannan and S. Battula. To: 24th Annual Meeting, November 9-13, 2003.
- (188) “Quantitative Assessment of Chemical Effects on Steroidogenic Enzymes in H295R Cells Line Using Q-RT-PCR”. With: T. Gracia, K. Hilscherova, X. Zhang, P. D. Jones, J. T. Sanderson and J. L. Nested. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (189) “A Cell Culture Based Assay for the Measurement of Xenobiotic Effects on Steroid Production”. With: P. D. Jones, M. Hecker, T. Gracia, X. Zhang, J. T. Sanderson and J. L. Newsted. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (190) “Reduction in Estrogenic Activity by Membrane-Based and Conventional Waste Water Treatment”. With: A. Coors, P. D. Jones and H. T. Ratte. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (191) “Effects of Estradiol and Atrazine on Testicular Ultrastructure in *Xenopus laevis*.” With: M. Hecker, W. J. Kim, J.-W. Park, D. L. Villeneuve, M. B. Murphy, P. D. Jones, K. R. Solomon, G. van der Kraak and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (192) “Effects of Atrazine Exposure on Aromatase Activity and CYP19 Gene Expression in Male Adult *Xenopus laevis*”. With: J.-W. Park, M. Hecker, M. R. Murphy, P. D. Jones, K. R. Solomon, G. van der Kraak, and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (193) “Gross Morphology and Gonadal Histology of Ranid Frog Species Collected from Atrazine-exposed Sites in Michigan”. With: A. R.T. Tompsett, M. B. Murphy, K. K. Coady, M. Hecker, L. DuPreez, P. D. Jones, E.E. Smith, G. van der Kraak, K. R.

Solomon and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.

- (194) “Estradiol and Testosterone Levels in Juvenile and Adult Frogs from Atrazine-exposed Sites in Michigan”. With: A. R. Tompsett, M. B. Murphy, K. K. Coady, M. Hecker, P. D. Jones, E. E. Smith, G. van der Kraak, K. R. Solomon and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (195) “Mixed Function Oxygenase Enzymes in Juvenile and Adult Frogs from Atrazine-Exposed Sites in Michigan”. With: M. B. Murphy, A. R. Tompsett, K.K. Coady, M.Hecker, P. D. Jones, J. A. Carr, E. E. Smith, G. van der Kraak and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (196) “Effects of Atrazine and Estradiol on Plasma Sex Steroid Concentrations in Male Adult *Xenopus laevis*”. With: M. Hecker, M. B. Murphy, P. D. Jones, K. R. Solomon, G. van der Kraak and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (197) “Seasonal Changes and Natural Variability of Plasma Sex Steroid Concentrations in *Xenopus laevis* from South Africa”. With: L. DuPreez, M. B. Murphy, P. D. Jones, K. S. Solomon, G. van der Kraak, E. E. Smith, R. Kendall and M. Hecker. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (198) “Effects of Atrazine on Mixed Function Oxygenases in *Xenopus laevis*”. With: J.-W. Park, M. Hecker, M. B. Murphy, P. D. Jones, K. R. Solomon, G. van der Kraak and R. J. Kendall. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (199) “Induction of EROD by TCDD and Selected PCBs in Primary Hepatocytes of Brown House Snakes (*Lamprophis fuliginosus*”. With: P. D. Jones, M. Hecker, M. B. Murphy, and W. Hopkins. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (200) “Occurrence of Estrogenic Compounds at Swinery Waste Treatment Plant”. With: T. Furuichi, K. Suzuki, K. Kannan and S. Masunaga. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (201) “Perfluorinated Compounds in Aquatic Organisms at Various Trophic Levels in a Great Lakes Food Chain”. With: K. Kannan, L. Tao, S. Pastva and D. Jude. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (202) “Characterization of Dioxin-like and Estrogenic Activities in River Sediments from Masan and Lake Shihwa, Korea, using In Vitro Bioassay”. With: H. Yoo and J. S. Khim, To: Annual Meeting, November 14-18, 2004, Portland, Oregon.
- (203) “The Acute and Chronic Effects of Perfluorooctane Sulfonate to Northern Bobwhites”. With: J. L. Newsted, S. Beach and S. Gallagher. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.

- (204) "The Acute and Chronic Effects of Perfluorooctane Sulfonate to Mallards". With: J. L. Newsted, S. Beach and S. Gallagher. To: 25th Annual Meeting, November 14-18, 2004, Portland, Oregon.

* **SETAC-Europe.**

- (1) "A Rapid, Acute Test Using *Daphnia magna* for Evaluation of Sediment Toxicity." With E.C. Leweke-Kelin, J.A. Kubitz and J.M. Besser. First World Congress, March 27-31, 1993. Lisbon, Portugal.
- (2) "Novel Analytical Methods for Quantitation of Alkylphenolpolyethoxylates in Environmental Samples". With S.A. Snyder, D.L. Villeneuve, D.A. Verbrugge, K.M. Nichols, S.L. Pierens and E.M. Snyder To: 7th Annual meeting, April 6-10, 1997, Amsterdam, The Netherlands.
- (3) "Application of Novel Recombinant Cell Bioassays to Screen for Estrogen and Ahr Agonists in Wastewater Effluents". With D.L. Villeneuve, S.A.A. Snyder, A.L. Blankenship, S.R. Miles-Richardson, K.M. Nichols, S.L. Pierens and E.M. Snyder. To: 7th Annual meeting, April 6-10, 1997, Amsterdam, The Netherlands.
- (4) "Rainbow Trout Cell Bioassay Derived TEFs for Hologenated Aromatic Hydrocarbons: A Comparison". Villeneuve, D.L. and C.A. Richter. To: 7th Annual meeting, April 6-10, 1997, Amsterdam, The Netherlands.
- (5) "Strategies for Assessing Potential for Compounds to Modulate Endocrine Function in Aquatic Organisms". With S.R. Miles-Richardson, K.M. Nichols, S.L. Pierens, E.M. Snyder, S.A. Snyder and D.L. Villeneuve. To: 7th Annual meeting, April 6-10, 1997, Amsterdam, The Netherlands.
- (6) "Reproductive Impairment and Induction of Plasma Alkaline-Labile Phosphate in Fathead Minnows (*Pimephales promelas*) Exposed to Waterborne 17 β -Estradiol". With V.J. Kramer, S. Miles-Richardson and S.L. Pierens. To: 8th Annual meeting, April 14-18, 1998, Bordeaux, France.
- (7) "In vitro Bioassays in Assessment of AhR- and ER-Mediated Activity of Samples from Rivers in the Czech Republic". With K. Staffova, K. Kannan, I Holoubek, A. Ansorgova and M. Machala. To: 8th Annual meeting, April 14-18, 1998, Bordeaux, France.
- (8) "Mechanisms of Photo-enhanced Toxicity of Polycyclic Aromatic Hydrocarbons". With J.T. Oris and G.T. Ankley. To: 9th Annual Meeting, May 25-29, 1999, Leipzig Germany.
- (9) "Studies of the Mechanism of TCDD-induced Deformities and Embryo Lethality in Birds. With K. Staffova, A. Blankenship, M. Nie, D. Powell, K. Kemler, A. Villalobos and I. Holoubek". To: 9th Annual Meeting, May 25-29, 1999, Leipzig Germany.

- (10) "Evaluation of Cytotoxicity, TCDD-Like Toxicity and Estrogenicity of Complex Environmental Mixtures". With K. Staffova, L. Dusek, K. Kannan, I Houloubek and M. Machala. To: 9th Annual Meeting, May 25-29, 1999, Leipzig Germany.
- (11) "Oestrogenic and Antioestrogenic Potentials of Freshly Deposited Sediments Along the Elbe River, Germany." With M.-P. Beck, P. Balaguer, J.-C Nicholas and A.L. Blankenship. To: 9th Annual Meeting, May 25-29, 1999, Leipzig Germany.
- (12) "The Use of Vitellogenin ELISA to Measure the Effects of Estrogenic Substances on Laboratory Fishes". With P. D. Jones, S. L. Pierens, E. M. Snyder, S. Miles-Richardson, V. J. Kramer, S. A. Snyder, K. M. Nichols, S. A. Villalobos and D. L. Villeneuve. To: 3rd SETAC World Congress, May 21-24, 2000, Brighton, United Kingdom. *Invited keynote*
- (13) "Cloning of *Zona Radiata* Proteins From Rainbow Trout (*Oncorhynchus mykiss*): A Marker for Investigating Estrogenic Endocrine Modulators in Fish". With T. Celius, J. B. Matthews, S. A. Villalobos and T. R. Zacharewski. To: 3rd SETAC World Congress, May 21-24, 2000, Brighton, United Kingdom.
- (14) "Accumulation of PCBs in Southern Ocean Pilot Whales (*Globicephala melas*) From New Zealand Stranding Events" With P. D. Jones, C. Schroder and P. J. Day. To: 3rd SETAC World Congress, May 21-24, 2000, Brighton, United Kingdom.
- (15) "Evaluation of the Toxicological Model of Action Perfluorinated Chemicals using Cellular Reporter Assays". With W.M. De Coen, A. Vlaeminck, P. Hoff, K. Willens and R. Blust. To: 11th Annual meeting, May 6-10, 2001, Madrid, Spain.
- (16) "The Effects of Perfluorinated Chemicals on the Steroid Binding Properties in the blood of Fish and Birds". With W.M. De Coen, W. Hu, P. Jones and K. Kannan. To: 11th Annual meeting, May 6-10, 2001, Madrid, Spain.
- (17) "Comparisons Among Peffluorinated Compounds of Effects on Gap Junction Intercellular Communication". With W. Hu, P.D. Jones, B.L. Upham and J.E. Trosko. To: 11th Annual meeting, May 6-10, 2001, Madrid, Spain.
- (18) "Tetrachlorodibenzo-p-dioxin Equivalents (TCDD-EQ) in Tissue Samples from Three Species in the Denver Metropolitan Area" With K.K. Kemler, P.D. Jones and A.L. Blankenship. To: 11th Annual meeting, May 6-10, 2001, Madrid, Spain.
- (19) "Demonstration of a Substantial Reduction in Uncertainty after Application of Site-Specific Data - A Case study with Wildlife Exposure to PCBs via Plants in the Diet." With M. Zwiernik, A.L. Blankenship, P.D. Jones, K. Kannan, D. Kay, P. Bradley, K. Strause, S. Pastva and R. Holem. To: 12th Annual meeting, May 12-16, 2002, Vienna, Austria.

- (20) “Comparison of Two Common Treatment Processes of Municipal Landfill Leachate with Regard to the Elimination of Xenoestrogens.” To: 12th Annual Meeting, May 12-16, 2002, Vienna, Austria. With: A. Coors, P.D. Jones, and H.T. Ratte.
- (21) “Demonstration of a Substantial Reduction in Uncertainty after Application of Site- Specific Data—A case Study with Wildlife Exposure to PCBs via Plants in the Diet.” To: 12th Annual Meeting, May 12-16, 2002, Vienna, Austria. With: M. Zwiernik, A.L. Blankenship, P.D. Jones, D. Kay, P. Bradley, K. Strausse, S. Pastva and R. Holem.
- (22) “Toxic and Endocrine Effects of Three Nonylphenol Isomers” With T.G. Preuss, A. Coors, and H.T. Ratte. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (23) “Plasma Sex Steroid Concentrations in *Xenopus laevis* Exposed to Atrazine in the Field in South Africa”. With M. Hecker, K. Coady, K.R. Solomon, A.M. Jooste and L. Du Preez. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (24) “Binding of Perfluorinated Chemicals to Serum Proteins”. With P.D. Jones, W.Y. Hu, W. De Coen, and J.L. Newsted, To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (25) “Principal Components Analysis of Dioxins from Rocky Mountain Arsenal and Denver, Colorado.”. With P.D. Jones, J.L. Newsted, G. Henningson, L. Williams, C. Bicher, and J. Slocomb. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (26) “Comparison of Genome-Wide Gene Expression Analysis Methods”. With W. Hu, and P.D. Jones. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (27) “Identification of Genes Responsive to Perfluorooctane Sulfonate Acid Using Gene Expression Profiling”. With W. Hu, P.D. Jones, C. Lau, and J.L. Newsted. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (28) “Estrogenic Activity in Waste Waters of Different Origins Before and After Treatment with Advanced Methods”. With A. Coors, P.D. Jones and H.T. Ratte. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (29) “In Vitro Dioxin Toxicities of Photoproducts Formed by Irradiation of Monochlorophenols in Ice and Liquid Water”. With J. Janosek, L. Blaha, J. Klanova, P. Klan and I. Holoubek. To: 13th Annual Meeting, April 27-May1, 2003, Hamburg, Germany.
- (30) “Acute Toxicity and Estrogenic Potency of Individual Nonylphenol Isomers” With T. G. Preuss, P. D. Jones and H.-T. Ratte. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.
- (31) “Structure-toxicity Relationships for N-heterocyclic PAHs: In vitro Cytotoxicity and Dioxin-like Effects”. With L. Blaha, I. Sovadinova, R. Vykonalova and J. Janosek. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.

- (32) “PCB Distribution and Accumulation Patterns in an Ecosystem-Wide Investigation of the Kalamazoo River Flood Plain, Michigan, USA”. With P. Bradley, P. D. Jones, M. Zwiernik, A. L. Blankenship and D. Kay. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.
- (33) “Effects of Chemicals on Steroidogenesis in H295R Cells”. With T. R. Gracia, K. Hilscherova, P. D. Jones, J.T. Sanderson, X. Zhang and J.L. Newsted. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.
- (34) “In Vitro Dioxin-like Potencies and Cytotoxicity of N-heterocyclic PAH Derivatives”. With I. Sovadinova, R. Vykonalova, J. Jaroslav and L. Blaha. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.
- (35) “Q-RT-PCR Methods for Evaluating Toxicant-Induced Effects of Steroidogenesis Using the H295R Cell Line”. With X. Zhang, R.M.K. Yu, T. Gracia, J.T. Sanderson, P.D. Jones, J.L. Newsted, and R.S.S. Wu. To: 14th Annual Meeting, April 18-22, 2004, Prague, Czech Republic.
- (36) “Development of a H295R Cell Line Test to Evaluate Toxicant-Induced Effects on Steroidogenesis”. With M. Hecker, M. Murphy, T. Gracia, P. Jones, X. Zhang, T. Sanderson and J. Newsted. To: 15th Annual Meeting, May 22-26, 2005, Lille, France.
- (37) “Complex Low Level Exposure Situation and Relevance of in vitro Oestrogenic Testing: Example from Elbe River and Baltic Sea”. With: M.-P. Beck, M. Hecker, I.-C. Beck, R. Bruhn, L. Karbe. To: 15th Annual Meeting, May 22-26, 2005, Lille, France.
- (38) “Effect of Humic Substances on Intracellular Receptors”. With: M. Bittner, J. Janošek, L. Blaha, K. Hilscherova and I. Holoubeck. To: 15th Annual Meeting, May 22-26, 2005, Lille, France.
- (39) “Seasonal Changes in Testicular Morphology in the African Clawed Frog, *Xenopus laevis*: A Histometric Analysis”. With: L. H. Du Preez, G. J. Everson, M. Hecker, J.A. Casrr, R. J. Kendall, E.E. Smith, G. Van der kraak, and K. R. Solomon. To: 15th Annual Meeting, May 22-26, 2005, Lille, France.
- (40) “Effects of Waste Coal-Polluted Dediments and Possible Causes of Intersex Occurrence in Freshwater Crayfish”. With: E. Mazurova, L. Blaha, K. Hilscherova, A. Duris, I. Horka, I. Holoubeck and P. Jones. To: 15th Annual Meeting, May 22-26, 2005, Lille, France.

* **SETAC-Europe, Russian Division:**

- (1) “Methods of Estimating the Ecological Risk of Dioxin-Like Activities in Sediments to Wildlife”. With A. Blankenship and K. Kannan. To: 1st Annual meeting, June 14-17, 1998, Saint Petersburg, Russia. *Invited, Plenary Keynote Address.*

- (2) "Butyltins in Fishes of the Southern Baltic Sea ". With C. Duda, K. Senthikumar, D. Villeneuve, K. Kannan and J. Falandysz. To: 1st Annual meeting, June 14-17, 1998, Saint Petersburg, Russia.

* **SETAC-Europe, German Language Division:**

- (1) "Estrogens Potential Organischer Extracts van Liessgewasser Sedimenten". To: Annual meeting, October 6-8, 2004, Aachen, Germany.

* **SETAC-Europe, United Kingdom Division:**

- (1) "Endocrine Disruptor Mechanisms: Beyond Receptor Binding". To Annual meeting, September 8-10, 2003, Aberdeen, Scotland. Invited Plenary Keynote.

* **SETAC-Asia-Pacific:**

- (1) "A Trophic Level Approach to Exposure Assessment of a PCB Contaminated Site" With A. M. Neigh, M.A. MacCarroll, M.J. Zwiernik, C.A. Ruppert, P.W. Bradley, D.P. Kay, C.S. Park, A.L. Blankenship and R. R. Holem. To: Annual meeting, September 28-October 1, 2003, Christchurch, New Zealand.
- (2) "Binding of PFOS and Related Perfluorinated Chemicals to Serum Proteins". With P.D. Jones, Wenyue Hu, Wim De Coen and J.L. Newsted. To: Annual meeting, September 28-October 1, 2003, Christchurch, New Zealand.
- (3) "Principal Components Analysis of Dioxins from Rocky Mountain Arsenal and Denver, Co.". To: Annual meeting, September 28-October 1, 2003, Christchurch, New Zealand.

* **Society of Toxicology:**

- (1) "Photo-enhanced Toxicity of Environmental Contaminants in the Hydrosphere." Symposium on the Source and Fate of Toxic Substances in Water. 10th Annual Meeting, Washington, D. C., February 23-27, 1987. *Invited*.
- (2) "A Multi-generational Study of the Effects of Consumption of Great Lakes Fish on Mink Reproduction". With J.C. Restum, R.J. Aulerich, W. Helferich and S.J. Bursian. 17th Annual Meeting, Houston, TX (1994), *The Toxicologist* 14:415.
- (3) "Recombinant Cell Bioassay Systems for Detection of Dioxin-like Chemicals and Analysis of Species Differences in Dioxin Responsiveness. 17th Annual Meeting, Houston, TX (1994), *The Toxicologist* 14:268.
- (4) "Reproductive Impairment and Induction of Alkaline-Labile Phosphate, a Biomarker of Estrogen Exposure in Fathead Minnows (*Pimephales promelas*) Exposed to Waterborn Estradiol". With V.J. Kramer, S. Miles-Richardson and S. Pierens. 20th Annual Meeting, Cincinnati OH (1997), *The Toxicologist* 17:27.

- (5) “Use of a Recombinant Human Breast Cancer Cell Line, MVLN, to Screen for Estrogenic Activity among Structurally-Related Alkylphenolic Compounds”. With Blankenship, A.L., S.A. Villalobos and R. Balcomb. 38th Annual Meeting, March 14-18, 1999, New Orleans, LA.
- (6) “*In Vitro* Vitellogenin Production by Carp (*Cyprinus carpio*) Hepatocytes as a Tool for Determining the Estrogenic Activity of Xenobiotics”. With M. van den Berg, J.M.W. Smeets, J. Komen, K.M. Nichols, and W. Seinen. 38th Annual Meeting, March 14-18, 1999, New Orleans, LA.
- (7) “TCDD and Other Ah-Receptor Agonists are Potent Anti-Estrogens in Cultured Carp (*Cyprinus carpio*) Hepatocytes”. With J.M.W. Smeets, J. Komen, K.M. Nichols, N.E. Kaminski and M. van den Berg. 38th Annual Meeting, March 14-18, 1999, New Orleans, LA.
- (8) “Use of H4LLE Bioassays to Estimate the Contribution of Halogenated Environmental Chemicals to Toxic Potencies in Fish Extracts from the Lower Fox River, Wisconsin.” With K.T. Connor, T.J. Iannuzzi, D.F. Ludwig, M.M. Moore and S.H. Safe. 38th Annual Meeting, March 14-18, 1999, New Orleans, LA.
- (9) “Toxic Responses of Medaka (d-rR Strain) to Polychlorinated Naphthalene (PCN) Mixtures after Embryonic Exposure by *in ovo* Nanoinjection: A Partial Life Cycle Assessment”. With S.A. Villalobos, D.M. Papoulias, J. Meadows, A.L. Blankenship, S.D. Pastva, K. Kannan and D.E. Tillitt. 38th Annual Meeting, March 14-18, 1999, New Orleans, L.A.
- (10) “Cross-Talk Between the Aryl Hydrocarbon Receptor (AhR) and Hypoxia Signaling Pathways”. With M. Nie and A.L. Blankenship. 38th Annual Meeting, March 14-18, 1999, New Orleans, L.A.
- (11) “Cloning of *Zona Radiata* Proteins From Rainbow Trout (*Oncorhynchus mykiss*): A Marker for Investigating Estrogenic Endocrine Modulators in Fish”. With T. Celius, J. B. Matthews, and T. R. Zacharewski. To: 39th Annual meeting, March, 2000, Philadelphia, PA.
- (12) “Comparisons Among Perfluorinated Compounds of Effects on Gap-Junction Intercellular Communication.” With W.-Y. Hu, P.D. Jones, B.L. Upham and J.E. Troscio. To: 41st Annual Meeting, March, 2002, Nashville, TN.
- (13) “Does Binding to Albumin Modulate The Biological Effects of Perfluorooctane Sulfonic Acid?” With P.D. Jones, W.-Y. Hu, and W. DeCoen. To: 41st Annual Meeting, March, 2002, Nashville, TN.
- (14) “Identification and Characterization of Genes Responsive to Perfluorooctane Sulfonic Acid Exposure During Exposure Using Differential Display and Gene Chips”. With W.-Y. Hu, P.D. Jones, C. Lau and R.G. Hanson. To: 41st Annual Meeting, March, 2002, Nashville, TN.

- (15) "Profiling Gene Expression in Human H295R Adrenocortical Carcinoma Cells and Rat Testes to Identify Pathways of Toxicity for Conazole Fungicides". With H. Re, J. E. Schmid, J. Retief, Y. Turpaz, X. Zhang, P. D. Jones, J. L. Newsted, J. P. Giesy, D. C. Wolf, C. R. Wood, W. Bao and D. J. Dix. To: 44th Annual Meeting, March 6-10, 2005, New Orleans.

* **Society of Toxicology; Michigan Regional Chapter:**

- (1) "Environmental Toxicology of the Fish and Wildlife of the Great Lakes". Annual Meeting, Warren, Michigan, November, 1989.

* **Teratology Society:**

- (1) "Concentrations of Polychloro-diaromatic Hydrocarbons in and Effects on Wildlife of the North American Great Lakes". 36th Annual Meeting, June 22-27, 1996, Keystone CO. *Invited Keynote*

* **Water Pollution Control Federation:**

- (1) "Toxicity Testing to Meet NPDES Permit Requirements." Section 7 Regional Chapter Meeting, February, 1991.

* **Wildlife Disease Association:**

- (1) "Use of Bald Eagles to Monitor Ecosystem Health in the Great Lakes Basin". With W.W. Bowerman, D.A. Best and T.J. Kubiak. 42nd Annual Conf., Guelph, Ontario, 1993.
- (2) "Albatross As Sentinels of Organochlorine Pollution in the North Pacific Ocean". With M Rolland, T. Colborn, P.D. Jones, C.L. Summer, H. Auman, D. Verbrugge and J.P. Ludwig. 43rd Annual Conf. 1995, East Lansing, Michigan.

* **Wildlife Disease Association:**

- (1) "The distribution of contaminants among tissues in mink". With Tansy, C.L., W.W. Bowerman, O.E. Baker, K. Kannan, S. Masunaga, and K. Senthilkumar. To: Annual Meeting, The Wildlife Society, November 2001, Reno, Nevada.

SYMPOSIA AND WORKSHOPS:

- (1) "Effects of Dissolved Organics Isolated from Surface Waters, on Availability of ²⁴¹Am to Algae and Bacteria." With D. Paine. To: *Environmental Chemistry and Cycling Processes, the Second in a Series of Mineral Cycling Symposia*; Augusta, Georgia. 1976.
- (2) "Cadmium Dynamics in Terrestrial Food Webs of a Coal fly Ash Basin." With S. P. Skinner and J. B. Gentry. To: *Environmental Chemistry and Cycling Processes, the Second in a Series of Mineral Cycling Symposia*, Augusta, Georgia. 1976.
- (3) "Effect of Naturally Occurring Aquatic Organics on Pu Uptake by Algae and Bacteria." To: *Dynamics of Transuranics in Terrestrial and Aquatic Environments*. Nevada Applied Ecology Group, U. S. Energy Research and Development Administration, Gatlinburg, TN. 1976.
- (4) "Cadmium Partitioning and Related Effects in Parasitized and Non-parasitized Mosquitofish (*Gambusia affinis - Poeciliidae*)." With D. H. Smith. To: *Energy and Environmental Stress in Aquatic Systems*, Augusta, GA. Nov. 2-4, 1977.
- (5) "Effects of Chronic Cadmium Exposure on Crayfish Survival, Growth and Tolerance to Elevated Temperatures." To: *Energy and Environmental Stress in Aquatic Systems*. With J. H. Thorp and S. A. Wineriter. Augusta, GA. Nov. 2-4, 1977.
- (6) A Relative Mobilization of Zinc, Cerium and Americium from Sediment in an Aquatic Microcosm." With R. A. Geiger. To: *Microcosms in Ecological Research*, Augusta, GA. 1978.
- (7) "The Realities of Utilizing (large-scale) Microcosms in Assessing the Fates and Effects of Potentially Hazardous Trace Contaminants." With J. W. Bowling, R. L. Knight and H. J. Kania. To: *Microcosms in Ecological Research*, Augusta, GA. 1978.
- (8) "Ecological Studies on the SRP." To: American Society of Metals, Augusta, GA. 1978. **Invited.**
- (9) "Trace Metal Cycling in a Swamp System Receiving Coal Ash Effluent." With D. W. Evans. To: *International Congress for Energy and the Ecosystem*. Grand Forks, ND. June, 1.
- (10) "Disposition of Benzo(a)pyrene in Aquatic Systems Components: Periphyton, Chironomids, *Daphnia* and Fish." To: *5th International Symposium on Polynuclear Aromatic Hydrocarbons*, October 28-30 1980, Battelle Columbus Laboratories, Columbus, Ohio.
- (11) "Development and Validation of Techniques for the Extraction and Quantitation of Anthracene in Sediment." With S. D. Haddock and P. F. Landrum. To: *11th Annual Symposium on the Analytical Chemistry of Pollutants*, Jekyll Island, GA. May, 1981.

- (12) "Copper Speciation in Soft, Acid Humic Waters: Effects on Bioaccumulation by and Toxicity to *Simocephalus serrulatus* (Daphnidae)." With A. Newell and G. J. Leversee. To: *Biological Availability of Trace Metals. Chemical Estimation, Ecological and Health Implications*. 21st Hanford Life Sciences Symposium, Richland, WA. October, 1981. **Invited**.
- (13) "Biological Control of Trace Metal Equilibria in Surface Waters. To: NATO Workshop on Trace Element Speciation in Superficial Waters and its Ecological Implications," Nervi, Italy. November, 1981. **Invited**.
- (14) "Conditional Stability Constants of Trace Metals and Naturally-occurring Humic Material: Their Application in Equilibrium Models and Verifications with Field Data." With J. J. Alberts. To: Symposium on Terrestrial and Aquatic Humic Materials, University of North Carolina, Chapel Hill, NC. November, 1981.
- (15) "Trace Metal Speciation: Simulations, Field Observations and Biological Effects. To: Effects of Trace Elements on Aquatic Ecosystems," Carolina Power and Light, Electric Power Research Institute, Raleigh, NC. March, 1982. **Invited**.
- (16) "Biochemical Indicators of Chronic Stress in Aquatic Organisms." To: Michigan State University Pesticide Research Center First Annual Conference. June, 1981.
- (17) "Trace Metal Speciation: Simulations, Field Observations and Biological Effects." To: Michigan State University Pesticide Research Center Annual Conference. June, 1982.
- (18) "International Conference on Heavy Metals in the Environment." Heidelberg, Germany. September, 1983.
- (19) "Replicability of Aquatic Multispecies Test Systems." To: *Symposium on Multispecies Toxicity Testing*. SETAC/ESA. Blacksburg, VA. May, 1983. **Invited**.
- (20) "Monitoring Environmental Effects - Molecules to Ecosystems." To: *Symposium on Human and Environmental Toxicology*. Memphis, Tennessee. May, 1983. **Invited**.
- (21) "Use of Microcosms for Hazard Identification- *Risk Assessment in Aquatic Ecology*. To: Electric Power Research Institute, Albuquerque, New Mexico. April, 1983. **Invited**.
- (22) *Workshop on Determining the Field Applicability of Environmental Assessment Methods*. U. S. E. P. A. Warrenton, Virginia. March, 1982. **Invited**.
- (23) North Central Workshop on Acid Deposition, National Acid Deposition Program. La Crosse, Wisconsin. October, 1983. **Invited Delegate**.
- (24) "Photoinduced Toxicity of Environmental Contaminants in Aquatic Organisms." With J. T. Oris, P. M. Allred, P. F. Landrum and D. W. Grant. To: Miami International Symposium on the Biosphere, April, 1984.

- (25) "Photoinduced toxicity of Hydrocarbons to Aquatic Organisms". With J. T. Oris, P. M. Allred, and P. F. Landrum. To: *International Conference on Oil in Freshwater: Chemistry, Biology and Technology*. Edmonton, Alberta. October, 1985. **Invited**.
- (26) "Current Status of Metal Speciation Studies." To: International Symposium on Metals Speciation, Separation and Recovery." Chicago, Illinois. July 27-August 1, 1986. **Invited**.
- (27) "Biochemical Indicators of Stress in Aquatic Organisms: Utility for Great Lakes Research." To: International Joint Commission Special Symposium on Trace Contaminants in the Great Lakes. Co-sponsored by Ecological Society of America and American Society of Limnology and Oceanography, Minneapolis, MN. June, 1985.
- (28) "Monitoring in Areas of Concern-Sediments Group." To: International Joint Commission. Burlington, Ontario, Canada, October, 1985.
- (29) "Protocol for Assessing Toxic Sediments." To: International Joint Commission. Detroit, MI. November, 1985.
- (30) "Variation in Quantification of Concentrations of Toxic Chemicals in Fish from the Laurentian Great Lakes: The Good, the Bad and the Manageable." To: World Conference on Large Lakes, Mackinaw Island, MI. May, 1986. **Invited**.
- (31) Aquatic Risk Assessment Methodology Workshop. National Agricultural Chemicals Association. Washington, D. C. October, 1986. **Invited**.
- (32) "Biomonitoring of the Aquatic Environment". To: US Fish and Wildlife Service. Ann Arbor, MI. February, 1987. **Invited**.
- (33) International Conference on Changing Perspectives in Agro-Chemicals: Isotopic Techniques for the Study of Food and Environmental Implications. FAO/IAEA, Neuherberg, Germany. November, 1987.
- (34) "Recent Developments and Intercomparisons of Bioassay Techniques, Both Acute and Chronic". To: International Conference on Environmental Bioassay Techniques and Their Application. Lancaster, UK. July, 1988. **Invited Plenary Lecture**.
- (35) "Conditional Stability Constants and Binding Capacity for Copper (II) by Ultrafilterable Material Isolated from Surface Waters of Wyoming, USA. To: 1st Internal Conf. Environ. Bioassay Techniques and Their Application. July 11-14th, 1988. Lancaster, England.
- (36) "Effects of Toxic Substances on Great Lakes Birds". Chevron Distinguished Lecture in Environmental Toxicology to University of California at Davis. January, 1989. **Invited Distinguished Lecture**.
- (37) "Maternal Transfer of Bio-active Polychlorinated Aromatic Hydrocarbons in Spawning Chinook Salmon (*Oncorhynchus tshawytscha*). With G. T. Ankley and D. E. Tillitt. To: 5th

International Symposium on Responses of Marine Organisms to Pollutants, April 12-14, 1989. Plymouth, England.

- (38) "Planar Chlorinated Hydrocarbons (PCHs) in Colonial Fish-eating Water Bird Eggs From the Great Lakes". With D. E. Tillitt and G. T. Ankley. To: 5th International Symposium on Responses of Marine Organisms to Pollutants, April 12-14, 1989 Plymouth England.
- (39) Evaluating the Risks to Human Health Associated with Exposure to Toxic Chemicals in the Great Lakes Basin Ecosystem.
 - 1) Workshop on Biological Science. April 15-18, 1989. Niagara on the Lake, Ontario. ***Invited Delegate.***
- (40) Guelph-Michigan State University Mini-Symposium on Environmental Toxicology. To: 1st Semi-Annual Meeting, February 12-14, E. Lansing, MI. ***Conference Organizer.***
- (41) Ecoinforma-'89. First International Congress and Exhibition on Environmental Information, Communication and Technology Transfer May 16-19. Bayreuth, Germany. ***Sponsor.***
- (42) Workshop on Fates and Effects of In-Place Pollutants in Aquatic Ecosystems Aug. 28-31, 1989. Pallanza, Italy. Co-organizer. "Sediment Quality Criteria: Bioassessment". With R. Hoke. ***Invited.***
- (43) Governor's Conference on Water in Michigan: Into the Next Century. March 23-24, 1989. E. Lansing.
- (44) "Utility of QSAR Systems for Predicting Aquatic Toxicities". To: 9th International Conference on Computers in Chemical Research. May 28-June 2, 1989. Riva del Garda, Italy.
- (45) Workshop on Cause-Effect Linkages. To: International Joint Commission/Council of Great Lakes Research Managers, March 28-29, 1989. Chicago, IL. ***Invited Delegate.***
- (46) Guelph-Michigan State University Mini-Symposium on Environmental Toxicology. To: 2nd Semi-Annual Meeting, June 12-13, Guelph, Ontario, Canada. ***Co-Organizer.***
- (47) "Flow Cytometric Analysis of Phytoplankton Assemblages in Lake Ontario". With W. Gala. To: Lake Ontario Trophic Transfer Workshop I. Canada Center for Inland Waters. June 29, 1989, Burlington, Ontario.
- (48) "Evaluating Risks to Human Health Associated with Exposure to Toxic Chemicals in the Great Lakes Basin Ecosystem". To: an International Working Conference, Buffalo, New York. October, 1989. ***Invited Delegate.***
- (49) "Workshop on Human Health Impacts of Halogenated Biphenyl and Related Compounds". November 8-9, 1989. Ann Arbor, Michigan. Sponsored by NIH, EPA and ATSDR. ***Invited Delegate.***

- (50) "Strategies for Remedial Actions in Contaminated Aquatic Systems". To: Ecology 89 - International Congress and Exhibition. August 28-31, 1989. Gothenburg, Sweden. **Invited.**
- (51) "Freshwater Sediment Quality Criteria: Toxicity Bioassessment". With R. A. Hoke. To: Fates and Effects of In-Place Pollutants in Aquatic Ecosystems. First Pallanza Workshop. Pallanza, Italy. August, 1989.
- (52) "Sediment Toxicity Assessment in the Great Lakes". To: Midwest Pollution Control Biologists Annual Meeting. Sponsored by US EPA, Region V, Chicago, IL. April 1990. **Invited.**
- (53) "Sediment Quality Criteria for Metals". To: International Conference on Metals in Soils, Plants and Animals. Orlando, FL. April, 1990. **Invited Keynote Address.**
- (54) "Fate and Bioavailability of Toxicants". To: Physiological and Biochemical Approaches to the Toxicology and Assessment of Environmental Pollution. Utrecht, Netherlands. August, 1990. **Invited Keynote Address.**
- (55) "Utilization of an *in vitro* Assay to Investigate the Environmental Effects of Planar, Halogenated Hydrocarbons". With P. D. Jones, D. E. Tillitt, J. L. Newsted, D. A. Verbrugge, N. DeGalan, G. T. Ankley, T. J. Kubiak, D. A. Best, M. E. Ludwig, and J. P. Ludwig. To: Physiological and Biochemical Approaches to the Toxicology and Assessment of Environmental Pollution. Utrecht, Netherlands. August, 1990.
- (56) "Tracking Pollutants: Effects on Great Lakes Fish and Wildlife". To: International Perspectives on Great Lakes Resource Management Issues. East Lansing, Michigan. March, 1990. **Invited Plenary Address.**
- (57) "International Conference on Issues in Food Safety and Toxicology". East Lansing, Michigan. June, 1990.
- (58) "Assessment of Human Exposure to Chemicals From Superfund Sites". East Lansing, Michigan. June, 1990. **Delegate.**
- (59) "Use of an *in vitro* Biochemical Assay to Assess Environmental Contamination". With P. D. Jones, D. Tillitt and G. Ankley. To: International Symposium on Aquatic Ecosystem Health, Waterloo, Ont., Canada. July, 1990. **Invited.**
- (60) "Flow Cytometry Techniques to Determine Toxicity of Environmental Samples to Algae". With R. B. Crawford, W. R. Gala, J. B. Drake and R. A. Hoke. To: International Symposium on Aquatic Ecosystem Health, Waterloo, Ont., Canada. July, 1990. **Invited.**
- (61) "Health and Environmental Effects of Chlorinated Aromatics". To: National Institutes of Health Special Colloquium on the Health Effects of Combustion Byproducts. Bathesda, MI. October, 1990. **Invited Keynote Address, Delegate.**

- (62) "Trends in Concentrations of Halogenated Hydrocarbons in Great Lakes Birds and Their Significance". To: Dioxin-90. Bayreuth, Germany. September, 1990. ***Invited Plenary Keynote Lecture.***
- (63) "Selected Enrichment of Coplanar Polychlorinated Biphenyls in Lake Michigan Chinook Salmon. A Comparison of Calculation Methods". With L. L. Williams. To: Dioxin-90. Bayreuth, Germany. September, 1990.
- (64) "PCB Concentrations in Plasma of Nestling Bald Eagles from the Great Lakes Basin, North America". With W. W. Bowerman *et al.* To: Dioxin-90. Bayreuth, Germany. September, 1990.
- (65) "Effects of Planar, Chlorinated Hydrocarbons on Fish, Fish-eating Birds and Furbearers in the Great Lakes Region". To: Workshop on Colonial Waterbirds, 11th Annual Meeting. Orlando, Florida. October, 1990. ***Invited.***
- (66) "Relationships Between Metal Availability and Toxicity of Sediments". To: Workshop on the Geochemical Aspects of Metal Bioavailability. 17th Annual Aquatic Toxicology Symposium. Vancouver, British Columbia. November, 1990. ***Invited.***
- (67) "Effects Assessment of Chemicals in Sediment". To: Organization for Economic Cooperation and Development. Copenhagen, Denmark. May 12-15, 1991. Presented invited lecture entitled "Toxicity Test Methods for Sediments-Freshwater". ***Invited Delegate.***
- (68) "Developing Biological Sediment Criteria". To: Environment Canada, Burlington, Ont. Canada, January 21-24, 1990. ***Invited Delegate.***
- (69) "Methods and Problems in Sediment Toxicity Testing". To: Workshop on Predictive Testing and Biomonitoring: Two Valuable Approaches in Aquatic Toxicology. Valencia, Spain. September 3-6, 1991. ***Invited Instructor.***
- (70) "Contrasting Total PCB Data, H4IIE-EROD Bioassay and Toxic Equivalency Factors Methods for Measuring Actual Toxicity ". With D. Tillitt. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, Michigan. September 29-October 2, 1991. ***Invited.***
- (71) "Congener-Specific PCB and H4IIE-EROD Bioassay Data on Fishes From Three Michigan Rivers: Relevance to Hydroelectric dam Relicensing and Inland Dwelling Piscivorous Wildlife". With M. E. Ludwig, P. D. Jones and B. Chisholm. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, Michigan. September 29-October 2, 1991. ***Invited.***
- (72) "H4IIE Bioassay TCDD-EQ in Colonial Waterbird Eggs from the Great Lakes Colonies 1986-1990 as Measured by H4IIE EROD Assay". With D. E. Tillitt and P. D. Jones. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, Michigan. September 29-October 2, 1991. ***Invited.***

- (73) "Uptake of Toxicity from Great Lakes Fish by Double-Crested Cormorants and Herring Gull Chicks Measured by H4IIE EROD Bioassay and PCB Congeners". With J. P. Ludwig, M. E. Ludwig, H. J. Auman, P. D. Jones and D. A. Verbrugge. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, Michigan. September 29-October 2, 1991. *Invited*.
- (74) "Reproductive Effects of Feeding Saginaw Bay Source Fish to Ranch Mink". With S. Heaton, R. Aulerich, S. Burton, D. Tillitt, T. J. Kubiak and J. A. Render. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, MI. Sept. 29-Oct. 2, 1991. *Invited*.
- (75) "Preliminary Analysis of Reproductive Effects From Feeding White Leghorn Chickens Fed Saginaw Bay Source Fish". With C. Summer, R. Aulerich, S. Bursian, J. A. Render and T. J. Kubiak. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, MI. Sept. 29-Oct. 2, 1991. *Invited*.
- (76) "Bald Eagle Reproductive Impairment Around the Great Lakes: Association with Organochlorine Contaminants". With W. W. Bowerman, D. A. Best, T. J. Kubiak, S. Postupalsky and D. Tillitt. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, MI. Sept. 29-Oct. 2, 1991. *Invited*.
- (77) "Panel Discussion: What Species Should be Monitored and What Methods Should be used by Great Lakes Wildlife Researchers to Observe and Quantify Trends in Great Lakes Toxicity?" With T. J. Kubiak (moderator) D. V. Weseloh, M. Mac, P. Beland, and G. Fox. To: Cause-Effect Linkages II Conference and Biennial Meeting of the International Joint Commission, Traverse City, MI. Sept. 29-Oct. 2, 1991. *Invited*.
- (78) "Microcosm Workshop". Wintergreen, VA. Oct. 6-11, 1991. *Invited Delegate*, Workgroup Leader. -Presentation: Role of Microcosms in testing and regulation of Agricultural Chemicals.
- (79) "Relative Concentrations of Coplanar PCB, Chlorinated Dibenzo-Dioxin (PCDD) and Dibenzo-Furan (PCDF) Congeners in Fish and Wildlife of the North American Great Lakes and Their Relationships with Observed Effects". With P. D. Jones, M. Mora, J. L. Newsted, D. A. Verbrugge, R. Aulerich, S. Bursian, C. Summer, J. P. Ludwig, M. J. Ludwig, T. J. Kubiak, D. A. Best, G. T. Ankley, K. B. Lodge, D. E. Tillitt, K. Stromberg and S. Tanabe. To: Dioxin' 91, Research Triangle Park, NC. Sept. 23-27, 1991. *Invited*.
- (80) "The use of TEFS for Understanding the Toxicology of Complex Mixtures of Chlorinated Hydrocarbons in Fish and Wildlife of the Great Lakes". With P. D. Jones, M. Mora, J. L. Newsted, D. A. Verbrugge, R. Aulerich, S. Bursian, C. Summer, J. P. Ludwig, M. J. Ludwig, T. J. Kubiak, D. A. Best, G. T. Ankley, K. B. Lodge, D. E. Tillitt, K. Stromberg and S. Tanabe. To: Dioxin' 91, Research Triangle Park, NC. Sept. 23-27, 1991. *Invited*.
- (81) "The Influence of Environment Contaminants on Bald Eagle populations in the Laurentian Great Lakes, North America". With W.W. Bowerman, D.A. Best, M.S. Martell and S.

Postupalsky. To: 4th World Conference on Birds of Prey and Owls. Berlin, Germany. May 10-17,1992.

- (82) "European Workshop on Freshwater Field Tests". Potsdam, Germany. June 25-26, 1992. **Invited Delegate.**
- (83) "Accumulation of Planar, Synthetic Halogenated Hydrocarbons and their effects on colonial, fish-eating waterbirds of the Great Lakes Region". To: Advances in Toxicology: Today for Tomorrow. Guelph, Ontario Canada. March 21, 1992. **Invited.**
- (84) "Desirable and necessary attributes for freshwater sediment toxicity tests, and the use of *Hyallolella azteca* and *Chironomus tentans* in freshwater sediments. To: Tiered Testing Issues for freshwater and marine sediments, September 16-18, 1992, Washington, D.C. **Invited.**
- (85) "Evaluation of the suitability of Reductive Dechlorination for the bio-remediation of PCB-contaminated soils and sediments." With J.F. Quensen,III, J.M. Tiedje, S.A. Boyd and M. Mora. To: Soil Decontamination using Biological Processes, Dec. 6-9, Karlsruhe, Germany.
- (86) "Workshop on Aquatic Life Criteria for Metals". January 25-29, Annapolis, MD, US EPA. Reevaluation of water quality criteria for metals. **Invited Delegate.**

Specific Panels:

- Physiological Mechanisms of Metals Toxicity
- Geochemical Speciation Calculations

- (87) "Effects of Planar, Chlorinated Hydrocarbons on Fish and Wildlife". To: Third International Congress on Toxic Combustion Products, June 14-16, 1993 Cambridge MS. **Invited Plenary Speaker.**
- (88) "Comparisons and Interactions among pentachlorobiphenyl (PCB) congeners and 2,3,7,8-tetrachloro-p-dioxin (TCDD) in an automated ethoxyresorufin O-deethylase bioassay." With T.A. Butzbaugh and R. Crawford. To: Great Lakes College Chemistry Conference. East Lansing, Michigan, March 13, 1993.
- (89) "Aquatic risk assessment and mitigation dialogue group for pesticides." 1993-1994. To: Sixth meeting to develop risk assessment techniques for pesticides. **Invited**
- (90) "Techniques for predicting ecosystem risks." To: National workshop on the characterization of risks to humans and the environment, Hull, Quebec, Canada. June 21-23, 1993. **Invited.**
- (91) "Update on Bald Eagle Research at MSU". To: Wildlife Bio-effects Conference, October 26, 1992, Kalamazoo, Michigan. with W.W. Bowerman. **Invited**
- (92) "Aerial Survey of the Great Lakes Shoreline to Determine Potential for Bald Eagle Occupancy". To: Wildlife Bio-effects Conference, Annual meeting, October 26, 1992, Kalamazoo, Michigan. with A. Bath and W.W. Bowerman. **Invited**

- (93) "Caffeine Breath Test for Measuring the P4501A1-Activity of Birds". To: Wildlife Bio-effects Conference. Annual meeting, October 26, 1992, Kalamazoo, Michigan. with L. Lindley. **Invited**
- (94) "Desirable and Necessary Attributes for Freshwater Sediment Toxicity Tests and the Use of *Chironomus tentans* in Freshwater Sediment". To: Tiered Testing Issues for Freshwater and Marine Sediments. US EPA Office of Water and Office of Research and Development. September 16-18, 1992, Washington, D.C. **Invited**
- (95) "Techniques for Predicting Ecosystem Risks". To: National Workshop on the Characterization of Risks to Humans and the Environment. June 21-23, 1993, Ottawa, Ontario, Canada. **Invited, Plenary.**

Session Facilitator-PCBs in the Environment. Case studies.

- (96) "Contaminants in the Great Lakes Ecosystem. To: Third International Congress on Toxic Combustion By-Products, NIEHS-MIT, June 14-16, 1993, Cambridge, MS. **Invited, Plenary.**
- (97) "Uptake, Disposition and Effects of Dietary 2,3,7,8-Tetrachlorodibenzo-p-dioxin on the Survival, Growth, Reproduction, Histology, Biochemistry and Hematology of Rainbow Trout" With R. Crawford, P.D. Jones, D.E. Tillitt, G.T. Ankley, J.L. Newsted, L.L. Williams, G. Walther and D.A. Verbrugge. To: DIOXIN '93, 13th International Symposium on Chlorinated Dioxins and Related Compounds, Vienna Austria, September 21-24, 1993.
- (98) "Production of Novel Recombinant Cell Line Bioassay Systems for Detection of 2,3,7,8-Tetrachlorodibenzo-p-dioxin-Like Chemicals". With M.A. Denison, M.H. El-Fouly, J.M.M.J.G. Aarts, A. Brouwer, and C. Richter. To: DIOXIN '93, 13th International Symposium on Chlorinated Dioxins and Related Compounds, Vienna Austria, September 21-24, 1993.
- (99) "Concentrations of Dissolved and Particulate PCBs in the Saginaw River: As Determined by Filtration and XAD-2 Resin Extraction". With D.A. Verbrugge, M. Mora, L.L. Williams, R. Crawford, R. Moll, R. Rossman and M. Tuchman. To: DIOXIN '93, 13th International Symposium on Chlorinated Dioxins and Related Compounds, Vienna Austria, September 21-24, 1993.
- (100) "Impacts of Multiple Stressors on Ecosystems". To: Ecotoxicology Conference: Multiple Stresses in Ecosystems." Davis, CA October 14-15, 1993. **Featured, Invited Speaker.**
- (101) "Effects of Dioxins on the reproduction of fishes". To: Workshop Reproduction Disturbances in Fish. Uppsala Sweden, October 20-22, 1993. **Invited Delegate.**
- (102) "A Review of Factors Affecting Productivity of Bald Eagles. With W.W. Bowerman and V.A. Kramer. To: North American Wildlife Biologists Network, Second Wingspread Conference on Developmental Abnormalities Associated with Environmental Chemicals, Racine, WS, December, 1993. **Invited Delegate.**

- (103) "Structural Factors Affecting the Binding of Chlorinated Organic Compounds and their Hydroxylated Derivatives to the Estrogen Receptor". With V.J. Kramer. To: Estrogens in the Environment III: Global Health Implications. Washington, D.C. January 9-11, 1994.
- (103) "Organochlorine Compounds in the Environment" An International Symposium, Toronto, ON July 24-31, 1994. *Invited Delegate*.
- Co-chairperson Steering Committee
- (105) "Development of an *in vitro* Rainbow Trout Cell Bioassay for Ah-R-Mediated Toxins", With C.A. Richter, V. Leykam and M.S. Denison. To: Dioxin-'94, November 21-27, 1994 Kyoto, Japan.
- (106) "PCBs and 2,3,7,8-Substituted Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Albatross Tissues from Midway Island in the Central Pacific Ocean" With P.D. Jones, D.J. Hannah, S.J. Buckland, P.J. Day, S.V. Leathem, L.J. Porter, H.J. Auman, J.P. Ludwig and C. Summer. To: Dioxin-'94, November 21-27, 1994 Kyoto, Japan.
- (107) "Chlorinated Compounds in the Environment: An Interpretive Review" With E. Delzell, J. Doull, D. Mackay, I.C. Munro, G.M. Williams, R.F. Willes, E.R. Nestman, J.C. Orr, P.A. Miller, M.E. Starudub and B.S. Lynch. To: Dioxin-'94, November 21-27, 1994 Kyoto, Japan. *Invited. Plenary, Keynote*.
- (108) "*In vitro* Estrogenicity and Anti-Estrogenicity of Hydroxylated PCBs in Human Breast Tumor (MCF-7) Cells" With V. Kramer, W. Helferich, A. Bergman and E. Wehler-Klein. To: Dioxin-'94, November 21-27, 1994 Kyoto, Japan.
- (109) "Reproductive Toxicosis of 17 β -Estradiol in Fathead Minnows", With S. Miles-Richardson, V. Kramer, and S. Fitzgerald. To: American Association of Veterinary Laboratory Diagnostics, Annual meeting, October 28-November 1, 1994, Grand Rapids, Michigan.
- (110) "The Use of Risk Assessment Techniques to Develop Acceptable Concentrations of Bioaccumulative Chlorinated Chemicals for Aquatic Based Ecosystems II: For the Protection of Piscivorous Wildlife". With P.A. Miller, M.E. Starodub and R.F. Willes. To: Aquatic Toxicology Workshop. October 3, 1994, Sarnia, Ontario, Canada.
- (111) "The Accumulation of Dioxin-Like Compounds by Birds of the Great Lakes and their Effects on Reproduction. To: Aquatic Toxicology Workshop. October 3, 1994, Sarnia, Ontario, Canada. *Invited, Plenary, Keynote*.
- (112) "An Interpretive Review of Chlorinated Compounds in the Environment" With E. Delzell, J. Doull, D. Mackay, I.C. Munro, G.M. Williams, R.F. Willes, E.R. Nestman, J.C. Orr, P.A. Miller, M.E. Starudub and B.S. Lynch. To: Chlorinated Organic Compounds in the Environment-Their Effect on Human Health and the Environment. Sept. 19-22, 1994, Berlin, Germany. *Invited Plenary*.

- (113) "Dioxin Risk Assessment: Science and Policy Issues" To: Rifkin Inc. October 20-21, 1994, Washington, D.C. **Invited, Plenary.**
- (114) "Environmental Chemistry at Michigan State University: Welcoming Address" To: 17th Annual Midwest Environmental Chemistry Meeting, East Lansing, MI, October 8, 1994. **Invited, Plenary.**
- (115) "In vitro Estrogenicity and Anti-estrogenicity of Hydroxylated, Chlorinated Biphenyls in Human Breast Cancer Tumor (MCF-7) Cells. With: V.J. Kramer, W.T. Helferich and Åke Bergman, To: Environmental Remediation and Toxicology Forum, June 2, 1996, Lansing, Michigan.
- (116) "PCB and PCB Metabolites in Albatross from the Midway Islands". With: M. Athanasiadou, I Athanasiadis and E. Klasson-Wehler. To: Nordic Symposium on Organic Pollutants, Sept. 17-20, 1995, Smygehus, Sweden.
- (117) "Ecological Risk Assessment: State of the Science" To: Workshop on Biotransformation and Risk Assessment in The Netherlands. SETAC-Europe Workshop, April 28-May 1, 1996. **Invited Keynote Speaker**
- (118) "Hydroxylated Polychlorinated Biphenyl Metabolites are Anti-estrogenic in a stably Transfected Human Breast Adenocarcinoma (MCF-7) Cell Line". To: Biotransformation in Ecological Risk Assessment, SETAC-Europe workshop, April 28-May 1, 1996, Noordwijerhout, The Netherlands. **Invited**
- (119) "Advancements in Ecological Risk Assessments" To: 6th Annual Environmental Liability Management Seminar. June 5, 1996, Chicago, IL. **Invited**
- (120) "Principles for Assessing Effects on the Endocrine System: Field and Laboratory Research". To: A Scientific Panel Discussion on Endocrine Disruptors in the Environment, March 16-19, 1996, Kiawah Island, SC. **Invited Keynote Speaker.**
- (121) "PCBs in the Detroit River Water Column". With K.L. Froese, D.A. Verbrugge, S.A. Snyder, F. Tilton, M. Tuchman and A. Ostasewski. To: EnviroAnalysis >96, Biennial Conference on Chemical Measurement and Monitoring of the Environment. May 13-16, 1996, Ottawa, Canada.
- (122) "Ecotoxicological Effects in Ecosystems: Wildlife Indicators of Environmental Contamination" With J.P. Ludwig. To: Assessing the Cumulative Impacts of Watershed Development on Aquatic Ecosystems and Water Quality (A National Symposium) March 18-21, 1996, Chicago, IL.
- (123) "Hydroxylated Polychlorinated Biphenyl Metabolites are Anti-estrogenic in a stably Transfected Human Breast Adenocarcinoma (MCF7) Cell Line". With V.J. Kramer, W.G. Helferich, Å. Berman and E. Klasson-Wehler. To: Dioxin >96, August 12-16, 1996, Amsterdam, The Netherlands.

- (124) “2,3,7,8-Tetrachlorodibenzo-p-dioxin Equivalents in Extracts of Baltic White-tailed Sea Eagles. With J. Koistinen, J. Koivusaari, J. Paasivirta. To: Dioxin >96, August 12-16, 1996, Amsterdam, The Netherlands.
- (125) “Effects of Embryonic and Adult Exposure to 2,3,7,8-Tetrachlorodibenzo-p-dioxin on Hepatic Microsomal Testosterone Hydroxylase Activities in Great Blue Herons (*Ardea herodias*). With J.T. Sanderson, D.M. Janz and G.D. Bellward. To: Dioxin >96, August 12-16, 1996, Amsterdam, The Netherlands.
- (126) “*In Vitro* Induction of Ethoxyresorufin O-Deethylase and Porphorins by Halogenated Aromatic Hydrocarbons in Avian Primary Hepatocytes”. With J.T. Sanderson and S.W. Kennedy. To: Dioxin >96, August 12-16, 1996, Amsterdam, The Netherlands.
- (127) “Progress in Ecological Risk Assessment” To: Dioxin >96, August 12-16, 1996, Amsterdam, The Netherlands. **Invited Keynote**
- (128) “A Survey and Hazard Assessment of Several Organic Contaminants and Mercury in Fish from a Remote Lake in Michigan’s Upper Peninsula”. With B.W. Nagy, K.S. Henry and N.R. Kevern. To: 1996 Forum on Environmental Remediation and Environmental Toxicology, September 19-20, 1996, Lansing, MI
- (129) “Effects of Waterborne Exposure of 17 β -Estradiol on Secondary Sex Characteristics and Gonads of Fathead Minnows (*Pimephales promelas*)”. With S.R. Miles-Richardson, V.J. Kramer, S.D. Fitzgerald, J.A. Render, B. Yamini and S.J. Barbee. To: 1996 Forum on Environmental Remediation and Environmental Toxicology, September 19-20, 1996, Lansing, MI.
- (130) “Endocrine Modulation: Perspectives on Aquatic Exposure and Effects Testing”. To: Endocrine Modulators Forum at 83rd Annual meeting of the Chemical Specialties Manufacturers Association, December 8-12, 1996, Fort Lauderdale, FL. **Invited**
- (131) “Development of Biomarkers, *in vitro* and *in vivo* Assays and Determination of Estrogenic Effects in Fishes”. With K.M. Nichols, E.M. Snyder, S.R. Miles-Richardson, S.E. Pierens, A.L. Blankenship, S.A. Snyder, D.L. Villeneuve and V.J. Kramer. To: Superfund Basic Research Program: *A Decade of Improving Health Through Multi-Disciplinary Research*, February 24-28, 1997, Chapel Hill, NC. **Invited**
- (132) “Monitoring for Complex Mixtures of Estrogen Agonists in the Aquatic Environment”. With S.A. Snyder, D.L. Villeneuve, S.E. Pierens, K.M. Nichols, E.M. Snyder, S.R. Miles-Richardson, S.E. Pierens and A.L. Blankenship. To: *A Decade of Improving Health Through Multi-Disciplinary Research*, February 24-28, 1997, Chapel Hill, NC. **Invited**
- (133) “Response of Fish Exposed to Municipal Wastewater Effluent *in situ*: Preliminary Evaluation of Endocrine Function”. With K. Nichols, E. Snyder and S. Pierens. To: Midwest Fish and Wildlife Conference. December 8-11, 1996, Omaha NB.

- (134) "Toxicant Identification and Evaluation (TIE) of Waste Water Effluents: Analytical Aspects". With S.A. Snyder, D. Villeneuve and D. Verbrugge. To: Pitcon >97, March 16-21, 1997 Atlanta GA.
- (135) "Status and Trends in Xenobiotics in Great Lakes Species" With A. Blankenship. To Toxics and Exotics in the Great Lakes, Agriculture and Natural Resources Days, Michigan State University, E. Lansing, MI, March 6, 1997. **Invited Plenary**
- (136) "Monitoring for Complex Mixtures of Estrogen Agonists and Antagonists in The Aquatic Environment. Development of Biomarkers, *in vitro* Assays and Determination of AEstrogenic" Effects in Fishes". To: University of Guelph Toxicology Students' Association 11th Annual Toxicology Symposium ***Endocrine Modulators: Are They Stealing Our Future?***, February 8, 1997, Guelph, ON. **Invited Keynote**
- (137) "Effects of Endocrine Disrupters on Wildlife" With E.M. Snyder. To: Iowa Conference on Emerging Environmental Health Issues. University of Iowa Center for Health Effects of Environmental Contamination, University of Iowa, Iowa City Iowa. September. 23-24, 1997. **Invited, Plenary.**
- (138) "Utility of Existing Tests with Mammals to Assess Endocrine Disruptive Effects". To: Workshop on Screening Methods for Endocrine Disruptors in Wildlife, March 17-19, 1997, Kansas City, MO. **Invited Plenary.**
- (139) "Effects of Waterborne Concentrations of 4-Nonylphenol". With S. Miles-Richardson, To: Health Conference >97-Great Lakes/St. Lawrence, May 13-15, 1997.
- (140) "Environmental Endocrine Disruption and Environmental Health". To: Perspectives on Environmental Endocrine Disruption, September 19, 1997, University of Memphis, Memphis, TN. **Invited, Plenary.**
- (141) "Monitoring for and Effects of Complex Mixtures of Polychlorinated-diaromatic Hydrocarbons on Wildlife". To: Conference on Current Issues on Chemical Mixtures, August 11-13, 1997, Colorado State University, Fort Collins, CO. **Invited.**
- (142) "Polychlorinated dibenzo-p-dioxins, Dibenzofurans and Polychlorinated Biphenyls in Street Dusts and Soil Samples from Savannah, Georgia". With B.G. Logganathan, K. Kannan, K.S. Sajwan, C.S. Chetty and D.A. Owen. To: Dioxin >97, August 25-29, 1997, Indianapolis, IN, *Organochlorine Compounds* 32:192-197.
- (143) "Profile of Chlorinated and Brominated Dioxins and Furans in Soil and Sediments Collected at a Former Chlor-Alkali Plant." With K.Kannan, and I. Watanabe. To: Dioxin >97, August 25-29, 1997, Indianapolis, IN, *Organochlorine Compounds* 31:502-505.
- (144) "Altered Biological Activity of Commercial PCB Mixtures Due to Microbial Reductive Dechlorination" With M. Mousa, P.E. Ganey, J.F. Quensen, B.V. Madhukar, K. Chou, L.J. Fisher and S.A. Boyd. To: Dioxin >97, August 25-29, 1997, Indianapolis, IN, *Organochlorine Compounds* 34:1-5

- (145) “Bioassay analysis of Mixtures of Estrogenic and Dioxin-like CompoundsA. With A. Blankenship. To: Dioxin >97, August 25-29, 1997, Indianapolis, IN, *Organochlorine Compounds* 34:1-5.
- (146) “Toxicant Identification and Evaluation (TIE) of Waste Water Effluents: Analytical Aspects”. With S.A. Snyder, D. Villeneuve and D. Verbrugge. To: 27th International Symposium on Analytical Chemistry, August, 1997, Jekyl Island, Georgia.
- (147) “Extraction and Identification of Endocrine Disrupters from Aqueous Mixtures”. With S.A. Snyder, D. Villeneuve and D. Verbrugge. To: 27th International Symposium on Analytical Chemistry, August, 1997, Jekyl Island, Georgia.
- (148) “Endocrine Disrupters in Wildlife. Why is it Important to Understand the Mechanism of Action?” To: Environmental Chemicals and Reproductive and Developmental Health: The Endocrine Disrupter Debate, October 17, 1997, St. Paul, Minnesota. ***Invited***
- (149) “Reproductive and Developmental Effects Data in Ecological Risk Assessment: Examples of Their Utility in Decision-Making and Comments on Their Limitations “ To: Workshop on Reproductive and Developmental Effects of Contaminants in Oviparous Vertebrates: Mechanisms, Ecological Consequences and Assessments of Risk. July 12-17, 1997, Gregson, Montana, Society of Environmental Toxicology and Chemistry Pelston Workshop Series. ***Invited Delegate***
- (150) “Environmental Endocrine Disruption and Environmental Health” To: Perspectives on Environmental Endocrine Disruption, University of Memphis Issues of the Environment Symposium Series, September 19, 1997, Memphis Tennessee.
- (151) “Monitoring Fates and Effects of Complex Mixtures in the Wildlife of the Great Lakes” To: Conference on Current Issues on Chemical Mixtures, Colorado State University and National Institutes of Health Sciences, August 11-13, 1997, Fort Collins, Colorado. ***Invited Delegate***
- (152) “Current Methods in PCB Risk Assessment”. To: Superfund Project Meeting: State University of New York-at Albany, December 8, 1998, Albany, New York.
- (153) Hot Topics in Environmental Chemistry, A Symposium in Honor of Professor Otto Hutzinger on the Occasion of His Retirement from the University of Bayreuth, Bayreuth/Kloster Banz, German, June 3-5, 1998. ***Invited Delegate***.
- (154) “Comprehensive Screening Techniques for Endocrine Disrupters in Aqueous Mixtures”. With S. A. Snyder, D. L. Villeneuve, E. M. Snyder and T. Keith. To: PITTCON >98, March 1-5, 1998, New Orleans, LA.
- (155) “Methods for Assessing the Effects of Endocrine Disrupters in Vertebrates”. To: American Society for Testing and Materials, Annual meeting, April 20-23, 1998, Atlanta, Georgia. ***Invited, Plenary***.

- (156) Hazardous Substances and Male Reproductive Health, An International Conference. May 14-15, 1998, New York, New York. **Invited Delegate.**
Session Chair- Exposure
- (157) ‘Effects of Waterborne Concentrations of 4-Nonylphenol and Nonylphenol Ethoxylate on the Secondary Sex Characteristics and Gonads of Fathead Minnows’. With S. Miles-Richardson, E.M. Snyder, K. Nichols, and S. Snyder. To: Health Conference-97-Great Lakes /St. Lawrence River, May, 1998.
- (158) ‘Application of Novel Recombinant Cell Bioassays to Screen for Estrogen and Aryl Hydrocarbon Receptor Agonists in Michigan Wastewater. With D. Villeneuve and S.A. Snyder. To: 5th Annual Michigan State University Zoology Department Research Day, April 4th, 1998, East Lansing, MI.
- (159) ‘Accumulation of Tributyltin and its Breakdown Products in Water from Birds from the Great Lakes and Coastal United States and Sea Ducks from Canada.’ With K. Kannan, J.E. Elliot, C. Duda and S. Snyder. To: 5th Annual Michigan State University Zoology Department Research Day, April 4th, 1998, East Lansing, MI.
- (160) ‘Assessment of Short-term and Chronic Toxicity of Polydimethylsiloxane (PDMS) to the Aquatic Invertebrate *Chironomus tentans* and *Hyallolela azteca*’. With K.S. Henry. To: 5th Annual Michigan State University Zoology Department Research Day, April 4th, 1998, East Lansing, MI.
- (161) ‘Butyltins in Fishes of the Southern Baltic Sea’. With C. Duda, D. Senthilkumar, D. Villeneuve, K Kannan and J. Falandysz. To: 5th Annual Michigan State University Zoology Department Research Day, April 4th, 1998, East Lansing, MI.
- (162) ‘Composition of Chloronaphthalene Isomers and Congeners in Technical PCN Formulations of the Halowax Series’. With J. Falandysz, M. Kawano, N. Morita, M. Masada and K. Kannan. To: To: Dioxin >98, August 25-29, 1998, Stockholm, Sweden, *Organochlorine Compounds*.
- (163) ‘Application of Novel Recombinant Cell Bioassays to Screen for Estrogen and Aryl Hydrocarbon Receptor Agonists in Michigan Wastewater.’ With D. Villeneuve and S.A. Snyder. To: 5th Annual Michigan State University Zoology Department Research Day, April 4th, 1998, East Lansing, MI.
- (164) ‘Requirement for Empirical and Theoretical Studies on Chemical Stress Evaluation and Assessment’, microsposium on Chemical Stress in Aquatic Systems 37th International Union of Pure and Applied Chemistry Annual Congress, August 14-19, 1999, Berlin Germany. **Invited Plenary**
- (165) ‘A Tiered Probabilistic Approach to Ecological Risk Assessment’. With K.S. Solomon, J.R. Coats, J.M. Giddings, K.M. Dixon and E.E. Kenaga. XIVth International Plant Protection Congress (IPPC), July 25-30, 1999, Jerusalem, Israel. **Invited Plenary**

- (166) "Risks of Chlorpyrifos in the Aquatic Environment: II Probabilistic Characterization of Exposure and Toxicity in Aquatic Organisms ". With K.S. Solomon, J.M. Giddings, J.R. Coats, K.R. Dixon and E.E. Kenaga." XIVth International Plant Protection Congress (IPPC), July 25-30, 1999, Jerusalem, Israel. **Invited Plenary**
- (167) "Effects of 4-nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows". With S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols and D.A. Villeneuve. To: Environmental Endocrine Disrupting Chemicals. March 7-12, 1999, Centro Stefano Franscini, Monte Verità, Ascona, Switzerland. **Invited Plenary**.
- (1) Session chair: **Phytoestrogens and Alkylphenols**
- (168) "Biomarkers as functional Measures of Exposure", To: Scientific Meeting on Biomarkers in Environmental Biology, July, 14-18, 1999, Landcare Institute, Christchurch, New Zealand. **Invited Plenary**
- (169) "Butyltin Contamination in Humans and Wildlife". With K. Kannan. To: **Great Lakes, Great Challenges**, 10th Annual Great Lakes Conference, March, 11, 1999, East Lansing, MI. **Invited Plenary**.
- (170) "A Tiered Probabilistic Approach to Ecological Risk Assessment". To: Chemical Stress in Aquatic Systems, International Union of Pure and Applied Chemistry, 37th Congress, August 14-19, Berlin, Germany. **Invited Plenary**
- (171) "The use of Vitellogenin production in Fish as a Biomarker of Exposure to and Effects of Environmental Estrogens". To: Pollution Effects-Biomarkers in Environmental Toxicology, July 14-16, 1999, Christchurch, New Zealand. **Invited Keynote**
- (172) "A Competitive Polyclonal ELISA for Determination of Vitellogenin in Cyprinids". With P. D. Jones. To: Pollution Effects-Biomarkers in Environmental Toxicology, July 14-16, 1999, Christchurch, New Zealand. **Invited**
- (173) "Results of the Ecological Risk Assessment of Organochlorines in the New Zealand Environment." With P. D. Jones and S. Scobie. To: Pollution Effects-Biomarkers in Environmental Toxicology, July 14-16, 1999, Christchurch, New Zealand. **Invited**
- (174) "Evaluation of Cytotoxicity, TCDD-like toxicity and Estrogenicity of Complex Environmental Mixtures." With K. Staffova, L. Dusek, K. Kannan, I. Holubek and M. Machala. To: SECOTOX, 6th Annual meeting of the Eastern European Regional Section (In conjunction with the 3rd annual meeting of the Union of Hungarian Toxicologists, Sept. 13-19, 1999, nföldvár, Hungary. **Invited**
- (175) "Dioxin-like and Non-dioxin-like Toxic Effects Polychlorinated Biphenyls: Implications for Risk Assessment." With K. Kannan, P. D. Jones and A.L. Blankenship. To: SECOTOX, 6th Annual meeting of the Eastern European Regional Section (In conjunction with the 3rd annual

meeting of the Union of Hungarian Toxicologists, Sept. 13-19, 1999, nföldvár, Hungary.
Invited Keynote

- (176) “Polychlorinated Naphthalenes in Soil, Sediment and Biota Collected Near a Former Chlor-alkali Plant in Coastal Georgia, USA.” With K. Kannan, A.L. Blankenship and T. Imigawa. To: SECOTOX, 6th Annual meeting of the Eastern European Regional Section (In conjunction with the 3rd annual meeting of the Union of Hungarian Toxicologists, Sept. 13-19, 1999, nföldvár, Hungary. **Invited**
- (177) “Vertical Profile of Dioxin-like and Estrogenic Potencies in a Sediment Core from Tokio Bay, Japan”. With K. Kannan, N. Yamashita, D.L. Villeneuve, S. Hashimoto and A. Miyazaki. To: SECOTOX, 6th Annual meeting of the Eastern European Regional Section (In conjunction with the 3rd annual meeting of the Union of Hungarian Toxicologists, Sept. 13-19, 1999, nföldvár, Hungary. **Invited**
- (178) “A Tiered Probabilistic Approach to Ecological Risk Assessment”. To: International Plant Protection Congress, July 25-30, 1999, Jerusalem, Israel. **Invited, Keynote**
- (179) “The Occurrence of Estrogenic Effects in Flanders, Belgium: A Screening of Resident Fish Populations.” With W. M. De Coen, K. Van Campenhout, G. Vandenberg, B. Denayer and C.R. Janssen. To: 9th International Symposium on Toxicity Assessment, September 26-October 1, 1999, Pretoria, South Africa. **Invited**
- (180) “Toxicological Damage to Fish and Wildlife after Dam Removals on Streams”. With J.P. Ludwig. To: Midwest Fish and Wildlife Conference, 61st Annual meeting, December 6-8, 1999, Chicago, Illinois. Special session entitled ADam Removal and Fish Passage: Restoration of Aquatic Ecosystems. **Invited**
- (181) “Vertical Profile of Dioxin-like and Estrogenic Potencies in a Sediment Core from Tokyo Bay, Japan”. With K. Kannan, N. Yamashita, D.L. Villeneuve, S. Hashimoto and A. Miyazaki. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (182) “Chloro-*s*-triazine Herbicides and Certain Metabolites Induce Aromatase (CYP-19) Activity in H295R Human Adrenocortical Carcinoma Cells”. With J.T. Sanderson, M. Heneweer, W. Seinen and M. van den Berg. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (183) “Dioxin-like and Non-dioxin-like Toxic Effects of Polychlorinated Biphenyls (PCBs): Implications for Risk Assessment”. With K. Kannan, A.L. Blankenship and P.D. Jones. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy. **Invited**
- (184) “Instrumental and Bioanalytical Measures of Dioxin-like Activity in Sediments from Masan Bay, Korea”. With K. Kannan, J. S. Khim, D.L. Villeneuve and C. H. Koh. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.

- (185) “An Innovative Injury Quantification Approach for Organisms Exposed to AhR-Active Compounds”. With D.F. Ludwig, T.J. Iannuzzi, K. Kannan, S.H. Safe, L.M. Schmeising, N.W. Gard, M.L. Moore and K. T. Connor. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (186) “Relative Potencies of Halowax Mixtures and Individual polychlorinated Naphthalenes (PCNs) to Induce Ah Receptor-Mediated Responses in the Rat Hepatoma H4IIE-Luc Cell Bioassay”. With A. L. Blankenship, K. Kannan, S. Villalobos, D.L. Villeneuve, J. Falandysz, T. Imagawa, and E. Jakobson. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (187) “Extractable Organohalogens (EOX) in Sediment and Biota Collected at an Estuarine Marsh Near a Former Chlor-alkali Facility”. With K. Kannan, M. Kawano, Y. Kashima and M. Matsui. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (188) “Estrogenic Potency of Individual Nonylphenol Congeners Isolated from Technical Mixtures”. With N. Yamashita, K. Kannan, S. Hashimoto and A. Miyazaki. To: Dioxin >99, 19th International Symposium on Halogenated Environmental Organic Pollutants, September 12-17, 1999, Venice, Italy.
- (189) “Vitellogenin as a Biomarker for Environmental Estrogens”. With P. D. Jones, W. De Coen and L. Tremblay. To: 3rd International Water Association (IWA) Specialized Conference on Hazard Assessment and Control of Environmental Contaminants (ECOHAZARD >99). December 5-8, 1999, Otsu, Japan. **Invited, Keynote.**
- (190) “Effects of Estrogenic Substances on Laboratory and Feral Fishes”. With P.D. Jones, S.A. Villalobos and D.L. Villeneuve. To: International Symposium on Environmental Endocrine Disruptors >99. December 9-11, 1999, Kobe, Japan. **Invited, Plenary.**
- (191) “An Analysis of Risk to Bald Eagles from Passage of Great Lakes Fish Over Hydroelectric Dams”. With W.W. Bowerman. To: Raptors 2000, a joint meeting of the Raptor Research Foundation and the World Working Group on Birds of Prey. April, 2000, Eliat, Israel.
- (192) “Biomarkers in Wildlife” To: International Conference on Arctic Development, Pollution, and Biomarkers of Human Health. May 1-3, 2000, Anchorage AL.
- (193) “Toxic Responses of Medaka (d-rR Strain) to Polychlorinated Naphthalene Mixtures after Embryonic Exposure by *in ovo* Nano-injection: A Ratial Life Cycle Assessment”. With S.A. Villalobos, D. Papoulias, J. Meadows, A.L. Blankenship, S. D. Pastva, K. Kannan, and D.E. Tillitt To: International Symposium: Endocrine-Disrupting Substance Testing in Medaka. March 17-20, 2000, Nagoya Japan. **Invited**
- (194) “Relative Potencies of Individual Polychlorinated Naphthalenes to Induce Dioxin-Like Responses in Fish and Mammalian *in vitro* Bioassays”. With D. L. Villeneuve, J.S. Khim, K. Kannan, J. Falandysz, V.A. Nikiforov and A.L. Blankenship. To: Dioxin 2000, 20th

International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.

- (195) “Polychlorinated Naphthalenes in Sediment, Fishes and Fish-Eating Waterbirds from Michigan Waters of the Great Lakes”. With K. Kannan, T. Imagawa, N. Yamashita and A. Miyazaki. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (196) “Polychlorinated Biphenyls in Arctic and Antarctic Organisms: Polar Bear, Krill, Fish, Weddell Seal and Skua”. With S. Corsolini, K. Kannan, T. Evans and S. Focardi. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (197) “Instrumental Analysis of Dioxin-Like Compounds in Environmental Samples from Ulsan Bay, Korea”. With K. T. Lee, J. S. Khim, K. Kannan, D. L. Villeneuve, and C. H. Koh. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (198) “In Vitro Gene Expression Analysis of Dioxin-Like Compounds in environmental Samples from Ulsan Bay, Korea”. With J. S. Khim, K.T., K.T. Lee, D.L. Villeneuve, and C.H. Koh. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (199) “Studies on the Mechanism of TCDD-Induced Deformities and Embryo Lethality in Birds”. With A. L. Blankenship, K. Hilcherova, K. Kemler, M. Nie, S.A. Villalobos, D. Powell and S. Bursian. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (200) “Isomer-Specific Analysis of Polychlorinated Naphthalenes in Several Polychlorinated Biphenyl Preparations”. With N. Yamashita, K. Kannan, T. Imagawa and A. Miyazaki. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, Monterey, CA.
- (201) “Profiles of Specific Isomers of Polychlorinated Naphthalenes in Tokyo Bay Sediment Core Sample”. With T. Imagawa, K. Kannan, N. Yamashita and A. Miyazaki. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 2000, Monterey, CA.
- (202) “Relative Potencies of Individual Polycyclic Aromatic Hydrocarbons to Induce Dioxin-Like and Estrogenic Responses in Three Different Cell Lines”. With J. S. Khim, K. Kannan, D. L. Villeneuve, J. Kang and C.H. Koh. To: Dioxin 2000, 20th International Symposium on Halogenated Environmental Organic Pollutants, August 13-17, 200, Monterey, CA.
- (203) “Effects to Marine Mammals”. With P. D. Jones, K. Kannan and , A. L. Blankenship. To: Costal and Estuarine Risk Assessment Forum”. July 20-21, 2000, Williamsburg, VA.

- (204) “Analysis, Design, and Management of Bald Eagle Habitat in Relation to Hydroelectric Operations: A Case Study in Michigan, USA”. With W. W. Bowerman, T. G. Grubb, A.J. Bath, G.A. Dawson and K. R. Ennis. To: Sea Eagle 2000, September 13-17, 2000, Bjorkogarden, Sweden. **Invited**
- (205) “SOT/SETAC Mixtures Workshop”. September 21 and 22, Washington, DC. **Invited Delegate.**
- (206) “Ecological Perspective”. To: Endocrine Disruptor Chemicals Session: State of the Lakes Conference (SOLEC). October 19, 2000, Hamilton, Ontario. **Invited, Plenary.**
- (207) “Persistent Organic Pollutants and Effects on Wildlife” With: Karl Strause. To: Bemidji Area All I/T/U Meeting, Indian Health Service, U.S. Dept. Health & Human Services. November 28-29, 2000, Bloomington, MN, **Invited, Plenary.**
- (208) “Use of Chemistry and Biology to Assess Endocrine Disruptors in the Environment”. To: West Japan Society for the Study of Endocrine Disruptors. December 12, 2000, Osaka, Japan. **Invited, Plenary.**
- (209) “Use of Chemistry and Biology to Assess Endocrine Disruptors in the Environment”. To: International Symposium on Environmental Endocrine Disruptors. December 16, 2000, Yokohama, Japan. **Invited, Plenary.**
- (210) Second Annual Conference on Sex and Gene Expression, (SAGE II). March 8-11, 2001, Winston-Salem, NC. **Invited Delegate.**
- (211) The Science of Pre-Harvest Safety-Bringing Sound Science to the Table, May 8-10, 2001, East Lansing, Michigan.
 Session Chairperson Environment, Wildlife and Water as Factors that Determine Food Safety
- (212) “Use of Chemistry and Biology to Assess Endocrine Disruptors in the Environment”. To: 3rd International Conference on Marine and Pollution Ecology, June 10-14, 2001, Hong Kong, China. **Invited Keynote**
 Session chair: Ecotoxicology
- (213) “Organochlorine Residues in and Their Effects on Fish and Wildlife of the North American Great Lakes”. To: Shiga-Michigan Joint Symposium, July 19-20, 2001, Hikone, Japan. **Invited Keynote.**
 Session chair: Environmental Contaminants and Their Toxicological Problems

- (214) “Assessing Environmental Changes Through Chemical Sediment Chronologies from Inland Lakes”. With D. Long. To: Shiga-Michigan Joint Symposium, July 19-20, 2001, Hikone, Japan.
- (215) “Organochlorine Residues in and Their Effects on Fish and Wildlife of the North American Great Lakes”. With K. Kannan. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea. **Invited Keynote**
- (216) “Polychlorinated-Naphthalenes, -Biphenyls, Dibenzo-p-dioxins in Tuna, Swordfish, Cormorants and Swallows from Italy”. With K. Kannan, S. Corsolini, T. Imigawa and S. Focardi. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea. **Invited**
- (217) “PCDDs, PCDFs and Dioxin-like PCBs in Humans and Wildlife Samples from India”. With K. Senthikumar, K. Kannan, O.N. Paramasivan, V. P. Shanmugasundaram, J. Nakanishi and S. Masunaga. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea.
- (218) “Characterization of Dioxin-like and Estrogenic Compounds in Environmental Samples from Onsan Bay and It’s Inland Region, Korea”. With J-S Khim, K.E. Lee, D. L. Villeneuve, K. Kannan and C. H. Koh. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea. **Best paper award**
- (219) “Bioassay Directed Instrumental Analyses for Characterization of Dioxin-like and Estrogenic Compounds in Korean Sediments”. With C. H. Koh, J. S. Khim, K. T. Lee, D. L. Villeneuve and K. Kannan. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea.
- (220) “Polychlorinated Dibenzo-p-dioxins and Dibenzofurans (PCDD/DFs) in Soils from Masan and Changwon Cities, Korea”. With S. H. Im, K. Kannan, M. Matsuda and T. Wakimoto. To: Dioxin 2001, September 9-14, 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, Gyeongju, Korea.
- (221) “Occurance of Dioxins, Furans and Dioxin-like PCBs in Arctic and Antarctic Wildlife”. With K. Senthikumar, K. Kannan, S. Corsolini, T. Evans, J. Nakanishi and S. Masunaga. To: Dioxin 2001, 21st International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 9-14, 2001, Gyeongju, Korea.
- (222) “Bioassay-directed Fractionation Analytical and Bioanalytical Methods for Identifying and Quantifying Endocrine Disruptors in Water”. To Sediment Quality Assessment of EDCs and POPs. Organized by SORGBIOS study Group (SORGBIOS ‘98-2000, NIER, SNU). Seoul, Korea, September 6, 2001.

- (223) “From Par Pond to the Great Lakes: Adventures with Wildlife and Environmental Chemistry”. To The Savannah River Ecology Laboratory: 50 Years of Environmental Research, Aiken, SC, October 19, 2001. *Invited Plenary*
- (224) “Organochlorine Residues in And Their Effects on Fish And Wildlife of The North American Great Lakes”. With K. Kannan. To Vietnam-United States Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxin. March 3-6, 2002, Hanoi, Vietnam. *Invited Delegate, Plenary.*
- (225) “Isomer-Specific Analysis of PCN and Dioxin-Like Compounds in DELOR: Technical PCB Mixtures from the Former Czechoslovakia”. With: S. Taniyasu, K. Kannan, I. Holuobek, Y. Hori and N. Yamashita. To: 4th Annual Meeting of Japan Society of Endocrine Disruptors Research, December 14-15, 2001, Tsukuba, Japan. *Invited Plenary.*
- (226) “Central Effects of Endocrine Disrupting Chemicals in Birds”. Scientific Committee on Problems in the Environment (SCOPE)/ International Union of Pure and Applied Chemists (IUPAC). International Symposium on Endocrine Active Substances, November 17-21, 2001, Yokohama, Japan. *Invited Delegate.*
- (227) “Dioxins and Dioxin-like Residues in and Their Effects on Fish and Wildlife of the North American Great Lakes. To: Vietnam-United States Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxin, March 3-6, 2002, Hanoi, Vietnam.
- (228) “Polychlorinated Dibenzo-p-Dioxin and Dibenzo Furans in Soils from Mason and Changwon, Korea”. To: Vietnam-United States Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxin, March 3-6, 2002, Hanoi, Vietnam.
- (229) “Results of a “Country-wide” Environmental Survey of Organochlorines in New Zealand ”. To: Vietnam-United States Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxin, March 3-6, 2002, Hanoi, Vietnam.
- (230) “Effects of Chronic Exposure of Fish to 2,3,7,8-TCDD”. To: Vietnam-United States Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxin, March 3-6, 2002, Hanoi, Vietnam.
- (231) “Bioanalytical Tools for the Detection and Identification of Biologically Active Products of Bioremediation and Biodegradation. To: Bioremediation and Biodegradation: Current Advances in Reducing Toxicity, Exposure and Environmental Consequences, June 9-12, 2002, Pacific Grove, CA.
- (232) “Levels of Perfluorooctane Sulfonate (PFOS) and Other Related Compounds in the Blood of Japanese People”. With S. Masunaga, K. Kannan, R. Doi and J. Nakanishi, To: 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain.

- (233) “Global Distribution and Bioaccumulation of Perfluorinated Hydrocarbons”. With K. Kannan, To: 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain. **Invited**
- (234) “Food Chanin Accumulation of Polychlorinated Naphthalenes in the Raisin River, Michigan, USA”. With: Hanari, N., K. Kannan, Y. Horii, S. Taniyasu, N. Yamashita and D.J. Jude. To: 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain.
- (235) “Accumulation and Elimination of PCDD/DFs, Dioxin-Like PCBs and Organochlorine Pesticides in Bald Eagles from Michigan, USA”. With: Kannan, K., K. S. Kumar, T. Takasuga, and S. Masunaga. To: 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain.
- (236) “Mass Balance Approaches to Dioxin Exposures in a Michigan River, USA”. With: K. Kannan, P. Bradley, N. Yamashita, J. McCabe and A. Taylor. To: 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain. **Invited keynote**
- (237) “Review of the Effects of Endocrine Disrupting Chemicals in Birds”. With: J. T. Sanderson, L. A. Verbrugge and P. D. Jones. To: SCOPE/IUPAC International Symposium on Endocrine Active Substances, November 17-21, 2002, Yokohama, Japan. **Invited Keynote**
- (238) “Perfluorinated Compounds: An Overview of Environmental and Analytical Issues”. To: Approaches to the Analysis of PFOA and It's Salts in Environmental Matrices-Problems and Pitfalls, May 1-2, 2003, Hamburg, Germany. **Invited Keynote**.
- (239) “Relative Cytotoxic Potencies (RCPs) of Environmental Chemicals (Organotins, Fluorinated Organic Compounds”. With T. Nasu, H. Nakata, H. Shoji and K. Kannan. 2003. To: Japan Society of Environmental Chemistry, June 22-24, 2003, Niigata, Japan.
- (240) “Relative Cytotoxic Potencies (RCPs) of Environmental Chemicals (Organotins, Fluorinated Organic Compounds”. With T. Nasu, H. Nakata, H. Shoji and K. Kannan. 2003. To: Japan Society of Environmental Chemistry, June 22-24, 2003, Niigata, Japan.
- (241) “Ecotoxicological Risk Assessment of Atrazine in Amphibians”. With: K.R. Solomon, J.A. Carr, L.H. Du Preez, T.S. Gross, R.J. Kendall, E.E. Smith and G.J. van der Kraak. To: Pan Pacific Pesticide Chemistry Society, June 3, 2003, Honolulu, Hawaii.
- (242) “Endocrine Disruptor Mechanisms: Beyond Receptor Binding. Methods for Screening for Endocrine Disruptor Activity”. German Chemical Society Annual Meeting, Munich, Germany, October 6-11, 2003. Invited Keynote
- (243) “Toxicological Perspectives on Perfluorinated Compounds”, With P.D. Jones and J.L. Newsted. To: 23rd International Symposium on Halogenated Environmental Organic Pollutants (POPs), August 24-29, 2003, Boston, Massachusetts. Invited Keynote

- (244) "Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans in Tissues from South Korea". With S.-H. Im, K.D. Strause and Y.-S. Chang. To: 23rd International Symposium on Halogenated Environmental Organic Pollutants (POPs), August 24-29, 2003, Boston, Massachusetts.
- (245) "Principal Components Analysis of Dioxins from the Rocky Mountain Arsenal and Denver, CO." With: P.D. Jones, J.L. Newsted, J. Slocum, G. Henningson, L. Williams and C. Bicher. To: 23rd International Symposium on Halogenated Environmental Organic Pollutants (POPs), August 24-29, 2003, Boston, Massachusetts.
- (246) "Determination of Fluoroquinolone Antibiotics in Wastewater Effluents by Liquid Chromatography-Mass Spectrometry and Fluorescence Detection". With: H. Nakata, K. Kannan and P.D. Jones. To: 23rd International Symposium on Halogenated Environmental Organic Pollutants (POPs), August 24-29, 2003, Boston, Massachusetts.
- (247) "Elimination of Estrogenic Activity in Advanced Waste Water Treatment". With: A. Coors, P.D. Jones and H.T. Ratte. To: Ecohazard 2003, International Water Association, September 14-17, 2003, Aachen Germany.
- (248) "Relative Immunotoxic Potencies (RIPs) of Environmental Chemicals (Organotins, Fluorinated Organic Compounds, Pharmaceuticals) Expressed Relative to a Tributyltin in Human Lymphocytes". With H. Nakata, H. Nasu, H. Shoi and K. Kannan. To: The Annual meeting of the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) "The Environmental Risk of Endocrine Disruptors", January 20-23, 2003, Matsuyama, Japan.
- (249) "Cell Bioassays for Detection of Aryl Hydrocarbon (AhR) and Estrogen Receptor (ER) Mediated Activity in Environmental Samples". To: US-Vietnam Scientific Workshop "Dioxin Screening, Remediation Methodologies and Site Characterization", November 3-5, 2003, Hanoi, Vietnam.
- (250) "Global Monitoring for Perfluorinated Compounds in the Environment-A Novel Class of Global Pollutants". To: 12th International Symposium on Biological Indicators-Bioindicators for Environmental Management, December 2-5, Hong Kong.
- (251) "Molecular Bioindicators". To: Workshop on Bioindicators of Environmental Management. City University of Hong Kong, December 12-14, 2003, Hong Kong, China.
- (252) "Ecotoxicological Risk Assessment of Atrazine in Amphibians" With: G. Van der Kraak, K.S. Solomon, J.A. Carr, L.H. Du Preez, T.S. Gross, R.J. Kendall and E.E. Smith. To: International Symposium on Environmental Endocrine Disruptors 2003, December 3-5, Sendai, Japan.
- (253) "Ecotoxicological Risk Assessment of Atrazine in Amphibians" With: G. Van der Kraak, K.S. Solomon, J.A. Carr, L.H. Du Preez, T.S. Gross, R.J. Kendall and E.E. Smith. To: International Symposium on Environmental Endocrine Disruptors 2003, December 3-5, Sendai, Japan.

- (254) “Assessment of Endocrine Disrupting and Cytotoxic Chemicals in a Coastal Nature Reserve in Hong Kong”. With H. L. Wong, W. H. Siu and P. K. S. Lam. To: International Symposium on Environmental Behavior and Ecological Impacts of Persistent Toxic Substances, March 18-20, 2004, Matsuyama, Japan.
- (255) “Ecological Risk Assessment of Environmental Contaminants for Waterbirds”. With J. C. W. Lam, S. Tanabe, H. L. Wong, B. S. F. Wong and P. K. S. Lam. To: International Symposium on Environmental Behavior and Ecological Impacts of Persistent Toxic Substances, March 18-20, 2004, Matsuyama, Japan.
- (256) “Monitoring of Persistent Organic Contaminants in Seawater and Sediment Along the Pearl River Delta, China”. With J-S Zheng, I. M. K. So, R. C. N. Fung, Z. Fang and P. K. S. Lam. To: International Symposium on Environmental Behavior and Ecological Impacts of Persistent Toxic Substances, March 18-20, 2004, Matsuyama, Japan.
- (257) “Bioanalytical Techniques for the Measurement of AhR-Active Compounds”. To: Technology Benchmarking Workshop For Sediment and Floodplain Remediation, March 25-26, 2004, Ann Arbor, Michigan, **Invited Keynote**.
- (258) “Ecotoxicological Risk Assessment of Atrazine in Amphibians”. With K. R. Solomon, L. H. Du Preez, J. A. Carr, T.S. Gross, R.J. Kendall, E.E. Smith and J. Van der Kraak. To: International Congress of Weed Science, June 20-25, 2004, Durban, South Africa. **Invited**
- (259) “Molecular Biomarkers of Steroidogenesis” To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, China. **Invited, Keynote**
- (260) “Perfluorinated Compounds in the Environment: Where are we, how did we get here and where are we going”. To: Gordon Conference on Environmental Sciences: Water, June 27-July 2, 2004, Plymouth, New Hampshire. **Invited**
- (261) “Evaluating Great Lakes Bald Eagle Nesting Habitat with Bayesian Inference”. With To: 3rd International Wildlife Management Congress, December 1-5, 2003, New Zealand.
- (262) “The Concentration levels of Organic Pollutants in Cell Line Assays from Sediment Samples in Creeks Entering to the Lake Shiwa, Korea”. With Koh, C. H., J.S. Khim and K. Kannan. 2002. To: *Proc. Int. Symp. Lowland Technology*, September 2002, Saga, Japan.
- (263) “Ecological Risk Assessments for Perfluorinated Fatty Acids in the Marine Environment”. With P.D. Jones, J.L. Newsted, M.K. So, S. Taniyasu, N. Yamashita, P.K.S. Lam and R.S.S. Wu. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China. **Invited, Plenary Keynote**
- (264) “Perfluorinated Compounds in Coastal Seawater in Hong Kong, China and Korea”. With M.K. So, S. Taniyasu, N. Yamashita, P.K.S. Lam, J.S. Zheng, S.H. Im and Z. Fang. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China.

- (265) “Ecological Risk Assessment of Waterbirds due to Environmental Contaminants”. With: J.C.W. Lam, S. Tanabe, H.L. Wong, BSF Wong and PKS Lam. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China. **Invited, Plenary Keynote**
- (266) “Environmental Health Risk Assessment of Organochlorines Associated with Fish Consumption in a Coastal City in China”. With: Q.T. Jiang, K. Chen, TKM Lee, H.L. Wong, J.S. Zheng, KKW Lo and PFS Lam. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China.
- (267) “Perfluorinated FGatty Acids (PFFAS) and Related Compounds in Coastal Seawater in Korea”. With: S.H. Im, M.K. So, S. Taniyasu, N. Yamashita, P.K.S Lam, J.S. Zheng and Z. Fang. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China.
- (268) “Perfluorinated Compounds in the Environment: Where are We, How did We Get Here, and Where are We Going”. To: Gordon Research Conference, June 27-July 2, 2004, Plymouth New Hampshire. **Invited Keynote**
- (269) “Perfluorinated Compounds in Seawater Samples of Korea”. With H. H. Im, P. K. S. Lam, N. Yamashita, M.K. So, S. Taniyasu, J. Zheng and Z. Fang. To: Korean Society for Environmental Analysis, International Conference for Environmental Analysis in the 21st Century. June 24-26, Seoul, Korea.
- (270) “Bioanalytical Techniques for Screening for AhR agonist Activities in Environmental Samples”. To: 3rd Annual Meeting of the Chinese Toxicology Association. June 13, 2004, Nanjing, China. **Invited Keynote**
- (271) “Toxicological Perspectives on Perfluorinated Compounds in Avian Species”. With P. D. Jones, To: 24th International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 6-10, 2004, Berlin Germany. **Invited Keynote**
- (272) “Effect of Exposure Duration on the Aryl Hydrocarbon Receptor-Mediated Activity of Polycyclic Aromatic Hydrocarbons Measured by In Vitro Reporter Gene Assay”. With Masunaga, S., R. Sakashita, T. Furuichi, J. Shirai and K. Kannan. To: 24th International Symposium on Halogenated Environmental Organic Pollutants and POPs, September 6-10, 2004, Berlin Germany.
- (273) “Monitoring of Poly-fluorinated Compounds in the Environment”. With P. D. Jones, J. L. Newsted, W.-Y. Hu, K. Kannan and D. Villeneuve. To: Workshop to Identify Emerging Contaminants of Concern and Their Implications for the Estuaring/Marine Environment and Human Health. May 11-12, 2005, Charleston, South Carolina. **Invited Keynote**
- (274) “The Reproductive Biology of the African Clawed Frog, *Xenopus laevis*: A Histometric Analysis.” With: L. H. du Preez, G. J. Everson, J. A. Carr, R. J. Kendall, E. E. Smith, G. van der Kraak, and K. R. Solomon. To: 5th World Congress of Herpetology. June 19-24, 2005, Stellenbosch, Aouth Africa.

- (275) “Seasonal Changes in Plasma Sex Steroid Concentrations and Gonadal Growth in Wild African Clawed Frogs, *Xenopus laevis*”. M. Hecker, G. J. Everson, M. B. Murphy, J. A. Carr, R. J. Kendall, E. E. Smith, G. van der Kraak, K. R. Solomon, L. H. du Preez,. To: 5th World Congress of Herpetology. June 19-24, 2005, Stellenbosch, Aouth Africa.
- (276) “Perfluorinated Chemicals: A novel Class of Chemicals in the Environment”. To: 2nd China International Symposium on Persisten Toxic Substances. May 15-18, 2005, Beijing, Peoples Republic of China. ***Invited Keynote.***
- (277) “The Influence of Land Use/Land Cover on the Accumulationof Mercury in Inland Lakes.” To: Geological Society of America, Annual Meeting, October 16-19, 2005, Salt Lake City, Utah.
- (278) “Chemical Induced Changesin Gene Expression Patterns Along the HPG Axis at Different Organizational Levels in the Japanese Medaka ”. With A. Tompsett, J.-W. Park, M. Hecker, P. D. Jones and J. W. Newsted. To: US EPA STAR Computational Toxicology Progress Review Workshop, July 18-19, 2005, Research Triangle Park, North Carolina.

ADDITIONAL SESSION CHAIRS AND WORKSHOP LEADER:

- (1) Symposium Chairman - "Microcosms in Ecological Research," November, 1978.
- (2) Section Coordinator - Review of "Quality Criteria for Water-EPA," for American Fisheries Society, 1978.
- (3) Session Chairman, "Energy and Environmental Stress in Aquatic Systems: Modeling Stresses and Heavy Metal Stresses," 1978.
- (4) Instructor, "Heavy Metals in the Environment," Oak Ridge Associated Universities, 1978, Oak Ridge, TN.
- (5) Session Chairman, "Environmental Chemistry and Cycling Processes: Elemental Cycling in Aquatic Ecosystem," 1976.
- (6) Session Chairman, "Thermal Ecology Symposium," Augusta, Georgia. April, 1975.
- (7) Session Chairman, "Toxic Substances and Fish Biochemistry." 47th Midwest Fish and Wildlife Conference, Grand Rapids, MI, December, 1985.
- (8) Chairman, "In-place Pollutants Workshop", USEPA, February, 1986, E. Lansing, MI.
- (9) Moderator, "Toxicology Research": A briefing for the House of Commons Select Committee on Agriculture. Parliament of Great Britain. April, 1986, E. Lansing, MI.
- (10) "Reducing uncertainty in risk assessment". May, 1987, East Lansing, MI. *Invited Delegate*.
- (11) "Sediment Toxicity Assessment". Visit of delegation of Soviet Scientists from the All Union Scientific Research Institute for Protection of Waters, October, 1988. East Lansing, MI. Host and organizer.
- (12) "Strategies for Remedial Actions in Contaminated Aquatic Systems". Ecology 89, International Congress: From Problems to Strategies. With R. A. Hoke. Gothenburg, Sweden, August, 1989. *Invited Plenary Presentation*.
- (13) "Fates and Effects of In-Place Pollutants in Aquatic Systems". Verbania-Pallanza Novara, Italy. August, 1989. *Co-Organizer*.
- (14) "International Symposium on Aquatic Ecosystem Health". Waterloo Ontario, Canada, July, 1990. Member of Organizing Committee.
- (15) "A Mechanistic Understanding of Bioavailability: Physical-chemical Interactions". Workshop, Sponsored by Society of Environmental Toxicology and Chemistry. August, 1992. Pelston, MI. Organizing Committee.

- (16) "A Workshop to Establish Research Priorities Strategies for Toxic Substances in the Great Lakes Ecosystem". Lansing, Michigan, 1990. Organizing Committee.
- (17) "Workshop on the Assessment and Remediation of Contaminated Sediments (ARCS)". U.S. EPA. February, 1990, Chicago, IL. *Invited Delegate*.
- (18) "Dioxin-90, The International Conference on Organo-halogen Compounds".
 -Session Chair-"Environmental Toxicology".
 -Discussion Leader-
 1) "Environmental Toxicology"
 2) "Environmental Processes"
- (19) "Conference on Cause-effect Linkages for Contaminants and Effects in the Great Lakes". September 29-October 2, 1991, Traverse City, MI.
 1) Panel discussion - what species should be monitored and what methods should be used by Great Lakes wildlife researchers to observe and quantify trends in Great Lakes toxicity. *Invited*.
 2) Panel discussion on cause-effect linkage. *Invited*.
- (20) "Assessment of Human Exposure to Chemicals from Superfund Sites". June 4-6, E. Lansing, MI.
- (21) "International Symposium on Aquatic Ecosystem Health". July 23-26, 1990. Waterloo, Ont. Canada. *Co-organizer*.
- (22) "Symposium on Contaminated Aquatic Sediments: Historical Records, Environmental Impact and Remediation". June 14-16, 1993. Milwaukee, WI.
 1) Scientific Organizing Committee.
- (23) "Inaugural Research Planning and Priority Setting Workshop". Canadian Network of Toxicology Centres, Mississauga, Ontario, Canada. March 15-17, 1992. *Invited Delegate*.
 (24) "European workshop on Freshwater Field Testing (EWOFT)". Potsdam, Germany, June 25-26. *Invited Delegate*.
- (25) "Bioavailability of Organic and Inorganic compounds to Aquatic Organisms". Pellston Conference, August 18-22, Pelston, MI. *Invited Delegate Member of Steering Committee*.
- (26) "Workshop on the Methodology for Deriving National Ambient Water Quality for the Protection of Human Health". US EPA. Office of Science and Technology Health and Ecological Criteria Division Human Risk Assessment Branch. September 13-16, 1992, Washington, D.C.

- (27) "Tiered Testing Issues for Freshwater and Marine Sediments". US EPA Office of Water and Office of Research and Development. September 16-18, 1992, Washington, D.C. ***Invited Delegate.***
- (28) National Workshop on the Characterization of Risks to Humans and the Environment". June 21-23, 1993, Ottawa Canada.
- Session Chair: "PCBs in the Aquatic Environment, Sources and Effects
- (29) "Ecotoxicology Conference: Multiple Stresses in Ecosystems". Davis, CA October 14-15, 1993. ***Featured, Invited Speaker.***
- Panel Discussion: Assessing Impacts of Multiple Stressors in Ecosystems.
- (30) "DIOXIN '93, 13th International Symposium on Chlorinated Dioxins and Related Compounds", Vienna Austria, September 21-24, 1993.
- Session Chair: "PCBs in the Environment"
- (31) "Reproduction Disturbances in Fish". Swedish Agricultural University, Faculty of Veterinary Medicine. Uppsala, Sweden, October 20-23, 1993. ***Invited Delegate.***
- (32) "SETAC-Europe Workshop on Sediment Toxicity Assessment". Renesse, The Netherlands, November 7-10, 1993. ***Invited Delegate***
- Working group on Interpretation of toxicity tests
- (33) "Environmental Risk Assessment for Organochlorine Compounds". Society of Environmental Toxicology and Chemistry. ***Invited Delegate***
- Steering Committee
- (34) "Wildlife Toxicology Research Issues", Chemical Industry Institute of Toxicology, June 19, 1994, Research Triangle Park, NC
- (35) "Chlorinated Compounds in the Environment: Wildlife Toxicological Issues", Chemical Manufacturer's Association, Chlorine Chemistry Committee Forum, May 2-4, June, 1994, Washington, D.C.
- (36) "Risk Assessment Forum's Workshop to Peer Review the Ecological Risk Assessment by US EPA. August 16-18, 1994, Washington, D.C. ***Invited Delegate***
- Reviewer: Risk Mitigation Methods
- (37) "Concentrations of Dioxins and Dioxin-Like Compounds in Birds of the Great Lakes Region and Their Effects". National Conference on Dioxin Risk Assessment: Science and Policy

Issues. 5th Annual Rifkin Conference, October, 20-21, 1994, Washington, D.C. **Invited Delegate**

- (38) Dioxin 94, Session Chair: "Ecotoxicology". Kyoto Japan, November, 1994.
- (39) Symposium on Environmental Exposures that Affect the Endocrine System. Wingspread, Racine, Wisconsin, January 13-14, 1995. **Invited Delegate**.
- (40) International Experts Meeting on Persistent Organic Pollutants: Towards Global Action. Vancouver, British Columbia, Canada, June 4-8, 1995. **Invited Delegate**
- (41) National Workshop on Ecological Effects of Endocrine Disruptors, US Environmental Protection Agency, Duluth, Minnesota, June 12-14, 1995. **Invited Delegate**
- (42) Canadian Network of Toxicology Centers, Annual Research Symposium, Toronto, Ontario, Canada, May 2-3, 1995. **Invited Delegate**
- (43) "Workshop on Toxicity Equivalency Factors for Ecological Risk Assessments". World Health Organization. August 9-10, 1996, Bilthoven, The Netherlands. **WHO Advisor**.
- (44) "Biotransformation in Ecological Risk Assessment". SETAC-Europe workshop, April 28-May 1, 1996, Noordwijerhout, The Netherlands. **Invited Delegate, Keynote Speaker**.
- (45) Dioxin 96. Co-chair Ecotoxicology Section, August 12-17, 1996, Amsterdam, The Netherlands.
- (46) Dioxin 96. **Invited panelist** for summary session at the end of the meeting. Current trends in effects of chlorinated compounds on wildlife. August 12-17, 1996, Amsterdam, The Netherlands.
- (47) "A Scientific Panel Discussion on Endocrine Disruptors in the Environment", March 16-19, 1996, Kiawah Island, SC. **Invited Delegate**

Session chair-Weight of evidence
Case study panelist

- (48) "Workshop on Endocrine Screening Testing Methodology" US EPA-CMA, Duke University School of the Environment, Durham, NC, July 15-16, 1996. **Invited Delegate**
- (49) APCBs, the New Equilibrium, A workshop of the Great Lakes Science Advisory Board's Workgroup on Parties Implementation". September 10, 1996, Windsor, ON. **Invited Moderator**
- (50) Dioxin 97, 17th Symposium on Chlorinated Dioxins and related Compounds, August 24-29 1997, Indianapolis, IN.

Member of National Scientific Organizing Committee

- (51) “Biomarkers of Marine and Freshwater Pollution”. November 10-12, 1997, Goa
Member International Organizing Committee
- (52) SETAC Technical Information Paper (TIPs) on Endocrine Disruptors.
Member Oversight Committee and Technical Editor
- (53) ASETAC-Europe/OECD Expert Workshop on Endocrine Modulators and Wildlife-Assessment and Testing (EMWAT)”. April 10-13, 1997, Amsterdam, The Netherlands.
Invited Delegate
- (54) “Endocrine Disruptor Workshop”, Smithsonian Institution, United Nations Environment Program, White House Office of Science and Technology Policy and US Environmental Protection Agency, January 23-24, 1997, Washington, D.C. ***Invited Delegate***
- (55) “Reproductive and Developmental Effects of Contaminants in Oviparous Vertebrates: Mechanisms, Ecological Consequences, and Assessment of Risk”. SETAC Pelston Workshop, July 12-17, 1997, Gregson, Montana. ***Invited Delegate***
- (56) “Derivation of Toxic Equivalency Equivalency Factors (TEFs) for Dioxin-Like Compounds for Human and Wildlife”. World Health Organization, June 15-17, 1997, Stockholm, Sweden. ***Invited Delegate***
- (57) “Effects of Endocrine Disruptors in Wild Mammals-Mink Case History” To: Duke Workshop on Screening Methods for Detecting Potential Endocrine Disrupting Chemicals in Wildlife. March 18, 1997, Kansas City, MO. ***Invited Delegate***
- (58) Blue Ribbon Panel to Investigate the Potential Endocrine Disrupting Properties of the Herbicide Atrazine. August 14-15, 1977, Dearborn, MI, ***Invited Delegate***
- (59) SETAC-Europe/OECD/EC Expert Workshop on Endocrine Modulators and Wildlife: Assessing and Testing (EMWAT) Veldhoven, The Netherlands, April 10-13, 1997. ***Invited Delegate***
- (60) Expert Panel for Developing a Comprehensive Monitoring Program for the Watersheds Which Serve as the Source of Drinking Water for New York City. September 16-17, 1997, ***Invited Panelist***
- (61) Workshop on Using Sentinel Species Data to Assess the Potential Human Health Effects of Chemicals in the Environment, US Army Center for Environmental Health Research, US EPA, National Center for Environmental Assessment and the Agency for Toxic Substances and Disease Registry, September 23-24, 1997, Frederick, Maryland. ***Invited Delegate***

- (62) “Perspectives on Environmental Endocrine Disruption”, University of Memphis Issues of the Environment Symposium Series, September 19, 1997, Memphis Tennessee.
- (63) “Conference on Current Issues on Chemical Mixtures”. Colorado State University and National Institutes of Health Sciences, August 11-13, 1997, Fort Collins, Colorado. ***Invited Delegate***
- (64) “Workshop on Fox River Sediment Remediation”. Science and Technical Advisory Committee of the Fox River Group. University of Wisconsin-Green Bay, October 35, 1997, Green Bay, Wisconsin. ***Invited Delegate***.
- (65) “Hazardous Substances and Male Reproduction”. Department of Community Medicine, Mount Saini School of Medicine, National Institute of Environmental Health Sciences, Superfund Basic Research Program and National Institute of Occupational Safety and Health, May 14-15, 1998, New York, New York. ***Invited Delegate***.

Chair: workgroup on AExposure Assessment/Biomarkers of Exposure”.

- (66) “Global Assessment of the State-of-the-Science of Endocrine Disruptors. United Nations Environment WHO Program and International Programme on Chemical Safety”. December 9-11, 1998, Washington, D.C. ***Invited Delegate***
- (67) Workshop of Expert Panel on Joint EU/US Endocrine Disruptor Research Directions, European Commission, Directorate General-12, , April 19-21, 1999, Ispra, Italy. ***Invited Delegate***.

Rapporteur, subgroup on Ecotoxicology

- (68) “Chemical Stress in Aquatic Systems, International Union of Pure and Applied Chemistry, 37th Congress, August 14-19, 1999, Berlin, Germany. ***Invited Delegate***

Session Chairperson, Microsymposium AChemical Stress in Aquatic Systems.”

- (69) 3rd International Water Association (IWA) Specialized Conference on Hazard Assessment and Control of Environmental Contaminants (ECOHAZARD >99). December 5-8, 1999, Otsu, Japan.

Session Chairperson, AEndocrine Disruptors in the Environment”.

- (70) “Effects of Estrogenic Substances on Laboratory and Caged Fishes”. With J.D. Jones, S.A. Villalobos, K.M. Nichols, E.M. Snyder, S.L. Pierens, S.R. Miles-Richardson and D.L. Villeneuve. To: 4th Princess Chulabhorn International Sciences Congress. Bangkok, Thailand. November 28-December 2, 1999. ***Invited, Plenary***.

- (71) “Arctic Development, Pollution and Biomarkers of Human Health”. National Institute of Environmental Health Sciences, Anchorage Alaska, May 1-3, 1999. ***Invited Delegate***.

- (72) “Risk Communication and Food Safety: Motivating and Building Trust”. East Lansing, MI, July 10-12, 1999. *Invited Delegate*.
- (73) “Costal and Estuarine Risk Assessment Symposium”. College of William and mary, Williamsburg, VA, July 20-21, 1999. *Invited Delegate*.
- (74) “Support of Science-Based Decisions Concerning the Evaluation of Toxicity of Mixtures”. September, 21-22, 2000, Washington, D.C. *Invited Delegate*
- (75) “Cause of Reproductive Failure in North American Atlantic Right Whales: New Avenues of Research”. April 26-28, 2000, Falmouth, MS. *Invited Delegate*
- (76) Shiga-Michigan Joint Symposium, July 19-20, 2001, Hikone, Japan. *Invited Delegate*.
 Session chair: Environmental Contaminants and Their Toxicological Problems
- (77) Dioxin 2001, September 9-14, 2001, Gyeongju, Korea. *Invited Delegate*
 Session chair: Ecotoxicology
- (78) Scientific Committee on Problems in the Environment (SCOPE)/ International Union of Pure and Applied Chemists (IUPAC). International Symposium on Endocrine Active Substances, November 17-21, 2001, Yokohama, Japan. *Invited Delegate*
- (79) “Symposium on Risk Assessment of Agrochemicals”. Agrochemicals Division of the American Chemistry Society. April 7-11, 2002, Annual meeting Orlando, FL. *Symposium organizer*.
- (80) “Workshop on Endocrine Disruptors”. International Water Association (IWA), Annual meeting, April 6-12, 2002, Melbourne, Australia.
- (81) “Review of Validation Status of in vitro Estrogen and Androgen Receptor Binding and Transcriptional Activation Assays”. Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM), May 20-23, 2002, Research Triangle Park, NC.
- (82) US-Vietnam Scientific Conference on Human Health and Environmental Effects of Agent Orange/Dioxins. Working group on Environmental Effects, March 7, 2002, Hanoi, Vietnam. *Invited Delegate, Working Group Chair*.
- (83) Expert panel Biological Activity of Remediation Products. Bioremediation and Biodegradation: Current Advances in Reducing Toxicity, Exposure and Environmental Consequences, June 9-12, 2002, Pacific Grove, CA.
- (84) “Environmental Science Programs”. Industrial Partners Meeting, Michigan State University, April, 11, 2002.

- (85) Independent Expert Panel for the Evaluation of in vitro estrogen and androgen assays. Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM). May 20-23, 2002, Research Triangle Park, NC. *Invited Delegate.*
- (86) Session Chair Ecotoxicology, 22nd International Symposium on Halogenated Environmental Organic Pollutants and POPs, August 11-16, 2002, Barcelona, Spain.
- (87) “Natural Attenuation of Metals Along The Tisza River-Floodplain-Wetlands Continuum”: A Workshop Sponsored by OTKA-MTA and NSF, September 15-19, 2002, Budapest, Hungary. *Invited Delegate.*
- (88) “Approaches to the Analysis of PFOA and It’s Salts in Environmental Matrices-Problems and Pitfalls”, May 1-2, 2003, Hamburg, Germany. *Invited Delegate.*
- (1) Session Chair Specific Media and Method Experiences
- (89) “Project Fishnet: International Expert Hearing”. A workshop to review and make suggestions on programs and projects to determine population trends of fish in Swiss rivers and possible causes for any observed declines, August 21-22, 2003, Kastanienbaum, Switzerland. Invited Delegate.
- (90) Session Chair “Perfluorinated Compounds: Environmental Fate and Effects, 23rd International Symposium on Halogenated Environmental Organic Pollutants and Persistent Organic Pollutants (POPs), August 24-29, 2003, Boston, Massachusetts, USA.
- (91) “Dioxin Screening, Remediation Methodologies and Site Characterization”. U.S.-Vietnam Scientific Workshop, sponsored by the US EPA, NIEHS and Vietnamese Institute of Biotechnology (NCST), November 3-5, 2003, Hanoi, Vietnam. Invited Delegate.
- (1) International organizing committee
- (2) Session Chair “Bioanalytical and Analytical Methods”
- (92) “Workshop on Bioindicators for Environmental Management”, City University of Hong Kong, December 1-3, 2003, Hong Kong. Invited Delegate.
- (1) International Organizing Committee
- (2) Lecturer in biomarker techniques.
- (93) “Workshop on Bioindicators and Biomarkers”, Organized by Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF), United Nations Environment Program (UNEP). This meeting was held to discuss methods to assist developing countries for monitoring the environment to meet their obligations under the Stockholm Protocols on Persistent Organic Pollutants. December 10-12, 2003, Tsukuba, Japan. Invited Delegate

- (1) Session chair and rapporteur “Bioindicators for monitoring POPs in developing countries”
- (94) Workshop on Sustainable Development: “Concern to Understanding, Understanding to Action”. April 1, 2004, Michigan State University, East Lansing, Michigan. *Invited Delegate*
- (95) “Ecological Risk Assessments for Perfluorinated Fatty Acids in the Marine Environment”. With: P.D. Jones, J.L. Newsted, M.K. So, S. Taniyasu, N. Yamashita, P.K.S. Lam and R.S.S. Wu. To: 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, Hong Kong, SAR, China
- (1) Session chair
- (96) “Strengthening Science-Based Decision Making to Reduce Risks from Persistent Organic Pollutants.” A workshop hosted by the State Environmental Protection Administration of China, US National Academy of Science, Chinese Academy of Science and Special Committee of Pollution of the Environment (SCOPE)-China. June 7-10, 2004, Beijing, China. Meeting Co-chair
- (97) "Fluoros" An international symposium on fluorinated alkyl organics, August 19 and 20th, 2005, Toronto Ontario, Canada.
- (1) Advisory Board"

INVITED LECTURES:

- (1) "Phytoplankton Stimulation by Humic Acids." To: Savannah River Ecology Laboratory. 1974.
- (2) "Role of Humic Substances in Aquatic Systems." To: Virginia Commonwealth University. 1974.
- (3) "Distribution of Metals in Southeastern Streams." To: University of Kentucky, Department of Geology. 1975.
- (4) "Humic Substances, What They are and Why They are Important in Natural Systems." To: Buffalo State College, Department of Biology. 1975.
- (5) "Stream Microcosms: Link Between Laboratory and Nature." To: Institute of Ecology, University of Georgia. 1976.
- (6) "Undergraduate Research Opportunities in Ecology at SREL." To: Spelman College. 1976.
- (7) "Undergraduate Research Opportunities in Ecology at SREL." To: Morris Brown College. 1976.
- (8) "Undergraduate Research Opportunities in Ecology at SREL." To: Morehead College. 1976.
- (9) "Undergraduate Research Opportunities in Ecology at SREL." To: Clark College. 1976.
- (10) "Graduate Research Opportunities in Ecology at SREL." To: Atlanta University. 1976.
- (11) "Stream Microcosm Research at SREL. Past, Present and Future. To: A Report on Progress and Projected Research." Microcosm Workshop, Oak Ridge National Laboratory. August 1976.
- (12) "Humic Substances in the Aquatic Environment: Implications for Biological Systems." To: Wake Forest University, Department of Biology. 1976.
- (13) "Metal Cycling in Aquatic Ecosystems." To: Skidaway Institute of Marine Sciences. 1976.
- (14) "Humic Substances in Aquatic Systems." To: University of Sydney, Departments of Zoology and Microbiology. 1976.
- (15) "Role of Humic Substances of Increased Phytoplankton Production under Iron Limited Conditions." To: New South Wales Institute of Technology, Department of Environmental Biology. 1976.
- (16) "Humic Substances in Natural Waters: What are They and Why are They Important?" To: Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography, Cronulla, Australia. 1976.

- (17) "Toxicity and Accumulation of Heavy Metals in Aquatic Systems." To: Australian National University, Zoology Department, Canberra, Australia. 1976.
- (18) "Role of Dissolved Organics in Metal Cycling and Toxicity in Soft Waters." To: Monash University, Department of Zoology, Melbourne, Australia. 1976.
- (19) "Fate and Biological Effects of Cadmium Introduced into Artificial Streams." To: Ministry for Conservation, Fisheries and Wildlife Division, Melbourne, Australia. 1976.
- (20) "Humic Substances in Natural Waters: What are They and Why are They Important?" To: Ministry of Conservation, Division of Fisheries and Wildlife, Melbourne, Australia. 1976.
- (21) "Accumulation of Metals by Fishes: A Case Study of Sample Preparation, Elemental Analysis and Data Interpretation." To: Ministry of Conservation, Fisheries and Wildlife Division, Melbourne, Australia. 1976.
- (22) "Metal Speciation in Southeastern Surface Waters." To: Caulfield Institute of Technology, Water Studies Center, Melbourne, Australia. 1976.
- (23) "Heavy Metal Toxicity to and Accumulation by Aquatic Organisms in Soft Water." To: University of Tasmania, Departments of Botany and Zoology, Hobart, Australia. 1976.
- (24) "Heavy Metals Associated with Coal Ash and Cycling in a Swamp System." To: Departments of Botany and Zoology, University of Auckland, New Zealand. 1976.
- (25) "Cadmium Cycling in Aquatic and Terrestrial Systems, the Dispersed but Accumulated Element." To: University of Waikato, Department of Zoology and Wellington City Council, Wellington, New Zealand. 1976.
- (26) "Research into Heavy Metal Cycling and Toxicity being Conducted at SREL." To: Cawthron Institute, Nelson, New Zealand. 1976.
- (27) "Humic Acids: Role in Elemental Availability to Phytoplankton." To: Department of Scientific and Industrial Research, Freshwater Section, Ecology Division, Christchurch, New Zealand. 1976.
- (28) "Effect of Naturally Occurring Organic Acids on Metal Uptake by Algae and Bacteria." To: Department of Biology, Vanderbilt University, Nashville, TN. 1977.
- (29) "Research Opportunities at SREL." To: Biology Department, Fisk University, Nashville, TN. 1977.
- (30) "Fate and Biological Effects of Trace Metals in the Environment." To: Department of Environmental Engineering, University of Florida, Gainesville, FL. 1977.

- (31) "Comprehensive Overview of Heavy Metal Cycling and Toxicity Studies at SREL." To: Department of Biology and Belle Baruh Institute of Marine Biology, University of South Carolina, Columbia, SC. 1977.
- (32) "Toxicity and Bioassay." To: Department of Zoology, University of Georgia, Athens, GA. 1977.
- (33) "Humic Substances in Surface Waters." To: Limnological Institute of The University of Uppsala, Sweden. 1977.
- (34) "Trace Metal Cycling in Soft Waters." To: Freshwater Institute of The University of Hamburg, Germany. 1977.
- (35) "Humic Substances in Surface Waters." To: Environmental Chemistry Department, University of Amsterdam, The Netherlands. 1977.
- (36) "Humics, Metals, Algae and Bacteria." To: Limnological Institute, Oosterzee, The Netherlands. 1977.
- (37) "Trace Metal Speciation in Freshwater." To: Oak Ridge Associated Universities Special Training Class: Trace Metals in the Environment, Oak Ridge, TN. 1978.
- (38) "Trace Metal Speciation." To: Zoology Department, University of Georgia, Athens, GA. 1978.
- (39) "Channel Microcosms: Their Use in Studying the Fates and Effects of Cadmium in Aquatic Ecosystems." To: Vanderbilt University, Nashville, TN. 1979.
- (40) "Adenylate Energy Charge as an Indicator of Stress in Invertebrates." To: University of Tennessee, Knoxville, TN. 1979.
- (41) "Adenylate Energy Charge as an Indicator of Stress in Invertebrates." To: Georgia Fisheries Workers Association, Rome, GA. 1979.
- (42) "Monitoring and Predicting the Fates and Effects of Trace Contaminants in Aquatic Systems." To: Department of Biology, University of Alabama at Birmingham, Birmingham, AL. February, 1980.
- (43) "Monitoring and Predicting the Fates and Effects of Trace Contaminants in Aquatic Systems." To: Department of Biology, Oklahoma State University, Stillwater, OK. April, 1980.
- (44) "Monitoring and Predicting the Fates and Effects of Trace Contaminants in Aquatic Systems." To: Department of Biology, Langston University, Langston, OK. April, 1980.
- (45) "Adenylate Energy Charge as a Measure of Chronic Stressors in Aquatic Organisms." To: U. S. Fish and Wildlife Laboratory, La Crosse, WI. 1980.

- (46) "River Ecology of the Southeastern United States." To: The Fisheries Research Laboratory of Kagoshima Faculty of Fisheries, Department of Biology, Kagoshima, Japan. September, 1980.
- (47) "River Ecology of the Southeastern United States." To: The Japan National Institute for Environmental Studies, Yatabe, Japan. September, 1980.
- (48) "Ecology of the Southeastern United States." To: The Fisheries Research Laboratory of Kagoshima University, Azuma Town, Japan. September 4, 1980.
- (49) "Environmental Toxicology at Alma College." To: Alma College Beta Beta Beta Chapter. November, 1982.
- (50) "Photoenhanced Toxicity of PAH to Aquatic Organisms." To: Sigma Xi, Chemistry Department, Eastern Michigan University, Ypsilanti, MI. March, 1983.
- (51) "Ultraviolet light in the Great Lakes, Actinic Responses." To: Division for Great Lakes Research, University of Michigan, Ann Arbor, MI. April, 1983.
- (52) "Phototoxicity of PAH to Aquatic Organisms." To: Savannah River Ecology Laboratory, Aiken, SC. September, 1984.
- (53) "Metal Speciation: Determination of Conditional Stability Constants for Humic Substances." To: School of Public Health, University of Michigan, Ann Arbor, MI. April 1985.
- (54) "Photo-induced Toxicity of Polycyclic Aromatic Hydrocarbons to Aquatic Organisms." To: Toxicology Program, Duke University, Durham, NC. January, 1986.
- (55) "Toxic Substances in the Great Lakes." To: Genesee High School, Genesee, MI. March, 1986.
- (56) "Photo-induced Toxicity of Polycyclic Aromatic Compounds to Aquatic Organisms." To: Toxicology Research Center, SUNY, University at Buffalo with visits to Great Lakes Institute, Buffalo State College, SUNY and Roswell Park Institute, Buffalo, NY. December, 1986.
- (57) "Sediment Toxicity Bioassays." To: Zoology Department, Department, Miami University, Oxford, OH. March, 1987.
- (58) "Sediment Toxicity Bioassay." To: Agricultural Chemicals Division, CIBA-GEIGY, Basel Switzerland. September, 1987.
- (59) "Toxicity of Sediments in the Lower Detroit River, Michigan." To: Research Center for Nature Management, Leersum, Holland. October, 1987.

- (60) "Sediment Toxicity Bioassay." To: Proctor and Gamble European Technical Center, Brussels, Belgium. October, 1987.
- (61) "Photo-induced toxicity of polycyclic Aromatic hydrocarbons to Aquatic Organisms." To: EAWAG/Swiss Federal Institute of Technology. Dubendorf, Switzerland. December, 1987.
- (62) "Sediment Toxicity Bioassay". To: Seenforschungs-Laboratorium der EAWAG/ETH, Kastanianbaum (Luzern), Switzerland. December 1987.
- (63) "Sediment Toxicity Bioassay." To: Instituto Di Idrobiologia, Pallanza Italy. December, 1987.
- (64) "Sediment Toxicity Bioassay". To: Center for Marine Research, Zagreb, Rujer Boskovic Institute, Zagreb, Croatia (Yugoslavia). January, 1988.
- (65) "Method of Sediment Toxicity Assessment in the Great Lakes". To: Alma College Departments of Chemistry and Biology, Alma, Michigan. October, 1988.
- (66) "Toxicity of Mixtures of Chlorinated Hydrocarbons to Fish-eating Birds in the Great Lakes Region". To: Sigma Xi Seminar Series. Michigan State University, E. Lansing, MI. October, 1988.
- (67) "Toxicity of Mixtures of Chlorinated Hydrocarbons to Fish-eating Birds in the Great Lakes Region". To: Sandoz Crop Protection Corp., Des Plaines, IL. December, 1988.
- (68) "Toxicity of Mixtures of Chlorinated Hydrocarbons to Fish-eating Colonial Water Birds in the Great Lakes Region". To: University of California-Davis. Chevron Distinguished Lecture in Environmental Toxicology, Davis, CA. January, 1989.
- (69) "Photo-induced Toxicity of Polycyclic Aromatic Hydrocarbons to Aquatic Organisms". To: Michigan State University Chapter of Sigma Xi, The Research Society Michigan State University, Acceptance Lecture for Junior Research Award. May, 1989.
- (70) (70) "Effects of Contaminants on Reproduction of Great Lakes Salmonid Fishes". To: Michigan State University Laboratory Animal Resources". Acceptance Speech for Investigator of the Month Award. May, 1989.
- (71) "Photo-induced Toxicity in Aquatic Systems". To: Canadian Center for Toxicology, University of Guelph, Guelph, Ontario, Canada. June, 1989.
- (72) "Toxicity of Complex Mixtures of Polychlorinated Hydrocarbons to Wildlife in the Great Lakes Region". To: Canadian Wildlife Service, Ottawa, Canada. June, 1989.
- (73) "Contaminants in the North American Great Lakes and Their Effects on Fish and Wildlife". To: Institut für Wasser-Boden und Lufthygiene des bundesgesundheitsamtes, Berlin. August, 1989.

- (74) "Sediment Toxicity Assessment Techniques". To: U.S. Environmental Protection Agency, Environmental Research Laboratory Duluth, MN. September, 1989.
- (75) "Sediment Toxicity Assessment: Application to Western Lake Erie and Toledo Harbor". To: University of Toledo, Dept. Biology, Toledo, OH. May, 1990.
- (76) "Methods of Assessing the Toxicity of Sediments". To: Technical University of Aachen, Aachen, West Germany. August, 1990.
- (77) "Concentrations of PCBs and Dioxins in Bird Eggs of the North American Great Lakes Region". To: Institute for Inland Water Management and Waste Water Management. Lelystad, The Netherlands. August, 1990.
- (78) "Methods of Assessing the Toxicity of Sediments". To: Free University of Amsterdam, Amsterdam, The Netherlands. August, 1990.
- (79) "Fates and Effects of Chlorinated Hydrocarbons on the Wildlife of the North American Great Lakes". To: Instytut Inzynierit Sprodowiska Poznan, Poland. Aug. 17, 1990.
- (80) "Contaminants in Fishes of the North American Great Lakes and Fish Consumption Advisories". To: National Institute of Public Health and Environmental Protection. Bilthoven, the Netherlands. February 7, 1992.
- (81) "Effects of Contaminants on Fish-Eating, Colonial Water Birds of the North American Great Lakes". To: The Agricultural University of Wageningen, the Netherlands. February 6, 1992.
- (82) "Contaminants in the North American Great Lakes". To: The Department of Environmental Biology, State University of Ghent, Ghent, Belgium. February 10, 1992.
- (83) "Fates and Effects of Trace Contaminants in the North American Great Lakes" To: Ecotoxicology Department, University of Bordeaux, Bordeaux, France.
- (84) "Effects of Chlorinated Hydrocarbons of Fish-eating Birds of the Great Lakes. To: Biology Department, University of Waterloo, Ontario, Canada, September 17, 1992.
- (85) "Coplanar PCB's, PCDD and PCDF in and Their Effects on Fish-Eating, Colonial Waterbirds of the Great Lakes". To: Biology Department, Trent University, Peterborough, Ontario, Canada, Jan. 26, 1993.
- (86) "Eagles of the Great Lakes Basin: Interactions Among Habitat Availability, Human Disturbance and Contaminants." To: Ecology and Evolutionary Biology Seminar, Michigan State University. February 3, 1993.
- (87) "Effects of Toxic Chemicals on Birds of the Great Lakes Region." To: Fisheries and Wildlife Club, Michigan State University. March 10, 1993.

- (88) "Concentrations of Synthetic Chemical in and Their Effects on Birds of the Great Lakes Region." To: Michigan Occupational and Environmental Medical Association. Annual Meeting. Dearborn, MI. June 11, 1993.
- (91) "Monitoring bald eagle population in the Great Lakes Basin". To: Technical University of Berlin. Berlin, Germany, August 29, 1993.
- (92) "The caffeine breath test for the determination of the induction status of mixed function monooxygenase enzymes in birds". To: Technical University of Berlin. Berlin, Germany, August 29, 1993.
- (93) "Effects of 2,3,7,8-TCDD on the reproduction of rainbow trout: Significance for the Great Lakes and Baltic Ecosystems". To: Institute of Environmental Chemistry, University of Umeå, Sweden, October 24, 1993.
- (94) "Contaminants in Birds of the Great Lakes Basin". To: Chippewa Nature Center, Midland Michigan, February 4, 1994.
- (95) "Understanding the IJC initiative for virtual elimination of chlorine chemistry in the Great Lakes Basin". To: Michigan Environmental Science Bd. February 9, 1994.
- (96) "Hazard assessment of the concentrations of PCBs in the lower Saginaw River, Michigan". To: Environmental Toxicology Department, University of California at Davis, March 11, 1994.
- (97) "Contaminants in and Their Effects on Wildlife of the North American Great Lakes". To: Dept. Physiology, University of Kuopio, Kuopio, Finland, May 13, 1994.
- (98) "Dioxin Equivalents in Biota of the North American Great Lakes:.. To: National Public Health Institute, Division of Environmental Health, Kuopio, Finland, May 13, 1994.
- (99) "Bald Eagle Populations of the North American Great Lakes: Population Trends and Persistent Toxic Chemicals". Dept. Biology, University of Joensuu, Joensuu, Finland, May 17, 1994.
- (100) "Contaminants in and Their Effects on Wildlife of the North American Great Lakes". To: Dept. of Biology University of Joensuu, Joensuu, Finland, May 19, 1994.
- (101) "Effects of Chlorinated Hydrocarbons on the Colonial Fish-eating Water Birds of the North American Great Lakes". To: Dept. Organic Chemistry, University of Jyväskylä, Jyväskylä, Finland, May 20, 1994.
- (102) "Bald Eagle Populations of the North American Great Lakes. To: Dept. Biology, University of Jyväskylä, Jyväskylä, Finland, May 20, 1994.
- (103) "Contaminants in Wildlife of the North American Great Lakes: Trends and Effects". To: Medical College of the University of Turku, Turku, Finland, May 23, 1994.

- (104) "Wildlife Hazard Assessments in the North American Great Lakes". To: Ecology Institute, Åbo Akademi, Turku, Finland, May 23, 1994.
- (105) "Toxicity of 2,3,7,8-TCDD to Rainbow Trout". To: Finish Game and Fisheries Research Institute, Helsinki, Finland, May 24, 1994.
- (106) "Toxicity of 2,3,7,8-TCDD-like Compounds to the Birds of the North American Great Lakes". To: Finish Game and Fish Research Institute, Helsinki, Finland, May 24, 1994.
- (107) "Toxicity of 2,3,7,8-TCDD-like Compounds to the Birds of the North American Great Lakes". To: University of Illinois College of Veterinary Medicine, Urbana-Champaign, Illinois, September 2, 1994.
- (108) "Contaminants in Albatross of Midway Atol: An Ecological Risk Assessment. To: Research Institute of Toxicology, University of Utrecht, Utrecht, The Netherlands, December, 1994.
- (109) "Polychlorinated Diaromatic Hydrocarbons in the Environment: Implications of Global Contamination. *Vollenweider Lecture in Aquatic Sciences*. To: National Water Research Institute, Environment Canada, Burlington, Ontario, Canada, January 5, 1995.
- (110) "Contaminants in the Great Lakes: Effects on Wildlife Populations". To: National Water Research Institute, Environment Canada, Burlington, Ontario, Canada, January 6, 1995.
- (111) "Concentrations of Di-aromatic, Halogenated Hydrocarbons in and their Effects on Colonial, -eating, Water Birds of the Great Lakes". To: Environmental Sciences Division of Oak Ridge National Laboratories, Oak Ridge, TN, June 29, 1995,
- (112) "Concentrations and Effects of Polychlorinated Aromatic Hydrocarbons in Great Lakes Wildlife" To: Dept. Food Science and Human Nutrition, Michigan State University. Feb. 8, 1996.
- (113) "Leadership means respect and communication". To: Alma College Senior Leadership Recognition Banquet, Alma Michigan, March 8, 1996,
- (114) "Monitoring for the Effects of Environmental Estrogens on Fishes". To: Dept. Toxicology, Wageningen Agricultural University, Wageningen, The Netherlands, August 20, 1996.
- (115) "Ecological Risk Assessments in Natural Resource Damage Assessments". To: Rohm and Haas Corp., December 2, 1996, Spring House Pennsylvania.
- (116) "Chlorinated Hydrocarbons in Birds of the North Central Pacific Ocean: Implications for Global Contamination". To: Rohm and Haas Corp., December 2, 1996, Spring House Pennsylvania.
- (117) "An Ecological Risk Assessment of Atrazine in Surface Waters of the Central United States". To: Rohm and Haas Corp., December 2, 1996, Spring House Pennsylvania.

- (118) “Monitoring for Complex Mixtures of Estrogen Agonists in the Aquatic Environment: Development of Biomarkers and *in vitro* Assays and Determination of Effects in Fishes”. To: Haskell Laboratories of the Dupont Corp. December 4, 1996, Newark, Delaware.
- (119) “Are Endocrine Disruptors Impacting Wildlife? A Review of the Evidence”. To: ILSI Risk Science Institute and the Brookings Institution and Society for Risk Analysis, October 23, 1996, Washington, DC.
- (120) “Status and Trends in Albatross Populations in the Pacific Ocean”. To: Dept. Fisheries and Wildlife Seminar Series, April 23, 1997, East Lansing, Michigan.
- (121) “Trends and Implications of Chlorinated Hydrocarbons in Fish and Wildlife of the North American Great Lakes”. To: Nicholas School of the Environment, Duke University, March 6, 1997, Durham, North Carolina.
- (122) “Albatross of the North Pacific Ocean: A Study of Global Contamination. February 5, 1997, Zoology Department, Michigan State University, East Lansing, Michigan.
- (123) “Monitoring for estrogen-like activity in surface waters”. To: ECT GmbH., Flörsheim/Main, Germany, June 4, 1997.
- (124) “Strategies for Assessing Estrogenic Compounds in Aquatic Systems”. To: Ecotoxicology Colloquium, Technical University of Berlin, June 10, 1997, Berlin Germany.
- (125) “Effects of Contaminants and Fishing By-catch on Albatrosses of the North Central Pacific Ocean”. To: Netherlands Institute for Sea Research, June 11, 1997 Texel, The Netherlands.
- (126) “Trends and Effects of Contaminants in the North American Great Lakes” To: The Institute of Wildlife Ecology and Toxicology, Clemson University, September 6, 1997, Clemson, South Carolina
- (127) “Use of Toxic Equivalency Factors in Ecological Risk Assessments of PCBs” To: General Electric Environmental Services Branch, September 12, 1997, Pittsfield, Massachusetts.
- (128) “Development of Biomarkers, *in vitro* assays and Determination of Estrogenic Effects in Fishes”. To: Departments of Environmental and Community Health Research and Department of Pharmacology, University of Mississippi, September 18, 1997, Oxford, Mississippi.
- (129) “Endocrine Disruptors in the Environment”. To: Department of Chemistry, University of Michigan, December 1, 1997, Ann Arbor, Michigan.
- (130) “Trends and Effects of Contaminants in the North American Great Lakes”. To: Institute of Environmental Sciences, University of North Texas, March 9, 1998, Denton, Texas.

- (131) "Trends and Effects of Contaminants in the North American Great Lakes". To: University of California at Los Angeles (UCLA) School of Public Health, March 12, 1998, Los Angeles, California.
- (132) "Endocrine Disrupters in the Environment". To: University of Michigan, School of Public Health, March 21, 1998, Ann Arbor, Michigan.
- (133) "Estrogen Mimicking Compounds in the Environment: Ecological Effects" To: Institute of Environmental Sciences, University of North Texas, June 23, 1998, Denton, Texas.
- (134) "Status and Trends of Contaminants in and their Effects on Fish and Wildlife of the North American Great Lakes". To: University of Texas Marine Research Laboratory, July 30, 1998, Port Aransas, Texas.
- (135) "Ecological Risk Assessments for PCBs; Biochemical and Probabilistic Methods." To: The Kalamazoo River Study Group, Sept, 9, 1998, Syracuse, New York.
- (136) "Status and Trends in Albatross Populations in the Pacific Ocean". To: Chippawa Nature Center, Sept 19, 1998, Midland, Michigan.
- (137) "Organochlorines in the New Zealand Environment". To: Regional Council and Public, September 30, 1998, Whangarei, New Zealand.
- (138) "Organo-chlorines in the New Zealand Environment". To: Chemistry Department and Public, University of Auckland October 1, 1998, Auckland, New Zealand.
- (139) "Ecological Risk Assessment Approaches for Organo-chlorines in the New Zealand Environment." To: Ministry of the Environment, October 1, 1998, Auckland, New Zealand.
- (140) "Organo-chlorines in the New Zealand Environment". To: Public, October 2, 1998, Hamilton, New Zealand.
- (141) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 5, 1998, Wakatane, New Zealand.
- (142) "Ecological Risk Assessment Approaches for Organo-chlorines in the New Zealand Environment." To: Ministry of the Environment, Organo-chlorines Advisory Panel , October 1, 1998, Rotorua, New Zealand.
- (142) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 7, 1998, Palmerson North, New Zealand.
- (144) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 8, 1998, Wellington.

- (145) "Ecological Risk Assessment Approaches for Organo-chlorines in the New Zealand Environment." To: Ministry of the Environment, October 8, 1998, Wellington, New Zealand.
- (146) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 9, 1998, Nelson and Tasman, New Zealand.
- (147) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 12, 1998, Invercargill, New Zealand.
- (148) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 13, 1998, Dunedin, New Zealand.
- (149) "Organo-chlorines in the New Zealand Environment". To: Regional Council and Public, October 12, 1998, Christchurch, New Zealand.
- (150) "Monitoring for the Effects of Endocrine Disruptors in Surface Waters" To: City University of Hong Kong, Jan. 6, 1999 Hong Kong, china.
- (151) "Risk Assessments of Polychlorinated Biphenyls (PCBs)". With K. Kannan. To Dept. Environmental Chemistry and Ecotoxicology, Masaryk University, Sept. 23, 1999, Brno, Czech Republic.
- (152) "Relative Potencies and Toxic Potentials of Polychlorinated Napthalenes (PCNs)". With K. Kannan. To Dept. Environmental Chemistry and Ecotoxicology, Masaryk University, Sept. 23, 1999, Brno, Czech Republic.
- (153) "Chloro-*s*-triazine Herbicides and Certain Metabolites Induce Aromatase (CYP-19) Activity in H295R Human Adrenocortical Carcinoma Cells". To National Food Safety and Toxicology Center. October 1, 1999.
- (154) "Risk Assessments for Dioxin-Like Chemicals in the Aquatic Environment". To: Tokyo University of Fisheries, Tokyo, Japan, December 11, 1999.
- (155) "Ecological Risk Assessments in Aquatic Systems". To: Institute of Environmental Science & Technology, Yokohama University, Yokohama, Japan, December, 13, 1999.
- (156) "Accumulation and Effects of PCBs in Aquatic Organisms". To: National Institute for Resources and Environment, Tsukuba, Japan, December 15, 1999.
- (157) "Vitellogenin as a Biomarker for Exposures of Fishes to Estrogenic Substances" To: National Institute for Resources and Environment, Tsukuba, Japan, December 15, 1999.
- (158) "Dioxins and Dioxin-Like Chemicals in the Aquatic Environment--Different, Yet Similar". To Center for Marine Environmental Studies, Ehime University, Matsuyama, Japan.

- (159) "Albatross of the North Central Pacific: Status and Trends of Populations and Contaminants". To Ecology, Evolution and Behavioral Biology Program, Michigan State University, East Lansing, Michigan.
- (160) "Strategies for Screening and Testing of Endocrine Disrupting Chemicals". To Department of Oceanography, Seoul National University, Seoul, Korea, September 6, 2001.
- (161) "Bioassay-directed Fractionation Analytical and Bioanalytical Methods for Identifying and Quantifying Endocrine Disruptors in Water". To Pohang University, Pohang, Korea, September 12, 2001.
- (162) "Perfluorooctanesulfonate (PFOS) in the Environment". To Reproductive Toxicology Section, US EPA National Health and Environmental Effects Laboratory, Research Triangle Park, North Carolina, November 8, 2001.
- (163) "Perfluorooctanesulfonate (PFOS) in the Environment". To National Food Safety and Toxicology Center, Michigan State University, East Lansing, Michigan, December 10, 2001.
- (164) "Perfluorooctanesulfonate (PFOS) in the Environment". To: Biology and Chemistry Departments, University of Pochefstroom, Pochefstroom, South Africa, October 9, 2002.
- (165) "Perfluorooctanesulfonate (PFOS) in the Environment". To: Environmental Sciences Program, Alma College, Alma, Michigan, December 4, 2002.
- (166) "Status and Trends and Consequences of Halogenated Hydrocarbons in the Great Lakes". To: Alma Environmental Action Group, Alma, Michigan, December 4, 2002.
- (167) "Instrumental and Bioanalytical Approaches to Assessing the Sources and Distribution of Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans". To: Technical Advisory Group, Pine River Michigan Superfund Site. Alma, Michigan, December 4, 2002.
- (168) "Perfluorinated Compounds in the Environment: The Discovery of a Novel Chemical Class" To: Honk Kong University of Science and Technology, February 27, 2003.
- (169) "Perfluorinated Compounds in the Global Environment", To: Department of Environmental Toxicology, University of Bayreuth, Bayreuth, Germany, October 6, 2003.
- (170) "Perfluorinated Compounds in the Environment", To: Department of Environmental Toxicology, Masarek University, Brno, Czech Republic, October 8, 2003.
- (171) "Endocrine Disruptors in the Environment-Bioanalytical Tools for Assessment", To: Department of Environmental Toxicology, Masarek University, Brno, Czech Republic, October 9, 2003.
- (172) "Optimization of the H295R Cell Line for Use in Evaluating Toxicant-Induced Effects of Steroidogenesis", To: US EPA, NHEERL, Reproductive Toxicology Branch, October 20, 2003, Research Triangle Park, NC.

- (173) “Perfluorinated Compounds in the Environment: Current Research at MSU. To: Center for Integrative Toxicology, Michigan State University, November 18, 2003.
- (174) “Monitoring and Ecological Risk Assessment of Environmental Endocrine Disruptors”, To: School of the Environment, Nanjing University, Nanjing, China, December 8, 2003.
- (175) “Is the Widely-Used Herbicide Atrazine an Endocrine Disruptor? If so, what is the risk?” To: National Food Safety and Toxicology Center, Michigan State University, East Lansing, Michigan, March 1, 2004.
- (176) “Ecological Risk Assessments for the Presence of Perfluorinated Hydrocarbons in Asian Coastal Waters”. To: School of the Environment, Nanjing University, Nanjing, China, June 13, 2004.
- (177) “Toxicity of Perfluorooctane Sulfonate”. To: National Institute of Advanced Industrial Science and Technology (AIST) Institute for Environmental Management Technology (EMTECH), Japan, December 7, 2004.
- (178) “Scientific Ethics in the 21st Century”. To: Faculty of Science, City University of Hong Kong, Kowloon, Hong Kong, SAR, China, December 13, 2004.
- (179) “Endocrine Disruptor Mechanisms: Beyond Receptor Binding”. To: Civil and Environmental Engineering Dept., University of Michigan, Ann Arbor, Michigan, April 8, 2005.

COURSES TAUGHT:

Alma College:

- * General Ecology: 1973
- * Environmental Science (Special Problems): 1973

University of South Carolina:

- * General Ecology: 1976
- * Man in the Environment: 1976

Michigan State University:

Undergraduate Courses:

- * Environmental Toxicology (NSC 410): 1981-1988.
- * Wildlife Biometry (FW 340): 1983-1984.
- * Great Lakes Biology and Management (FW 207): 1987-Present.
- * Environmental Studies (ICS 121) Guest Lecturer: 1992-Present.
- * Man in the Environment (FW 203) Guest Lecturer: 1989-Present.
- * Current Topics in Toxicology (ANS 417) Guest Lecturer: 1992-Present.
- * Ecosystem Assessment (FW 495), 1993-Present.
- * Environmental Issues and Public Policy (Zol 446): 2000-Present.
- * Introduction to Zoology (Zol 101): 2002

Graduate Courses:

- * Toxic Substances in the Great Lakes (FW 802): 1985.
- * Aquatic Toxicology (FW 831): 1983-1996.
- * Microcosms in Ecological Research (FW 801): 1982.
- * Environmental Chemodynamics (FW 814): 1988-1997.
- * Dynamics of Trace Substances in Aquatic Systems (FW 878): 1984-1997.
- * Pattern Recognition Techniques (FW 802): 1985.
- * Risk Assessment (ANS 890): 1995.
- * Aquatic Toxicology (Zol 868): 1999- Present.
- * Dynamics of Trace Substances in Aquatic Systems (Zol 878): 1997-
- * Environmental Chemodynamics (Zol 814): 1997-Present
- * Environmental Issues and Management (Zol 446): 1999-Present

Special Courses:

- * Spartan short course for the Michigan Sea Grant College Program, "Toxic Substances in the Great Lakes," January, 1985, East Lansing, Michigan.
- * Toxic Chemicals and the Environment: 1985, 3 cr., MSU Lifelong Education.

- * Michigan State University Lifelong Education Course, "Toxic Chemicals in the Environment," 1985.
- * Consortium for International Fisheries and Aquaculture Development (CIFAD). "Water Quality and Aquatic Ecology", 1986.
- * Safety of Food of Animal Origin". Summer Course Funded by PEW Foundation, annually 1991-1993.

International Courses:

- * "Predictive Testing and Environmental Biomonitoring". Universidad Internacional Menéndez Pelayo/Valencia, Spain, 1991.
- * "Sediment Toxicity and Bioassessment" Zoology Department, University of Coimbra, Portugal, April 1-2, 1993
- * "Tradition and Trends in Aquatic Toxicology: A Nordic Short Course, Supported by the Finish Academy of Science, Joensuu, Finland, May 5-May 19, 1994.
- * Short Course in Ecotoxicology: A Nordic Short Course, Supported by the Finish Academy of Science, University of Helsinki (held at Träverminne field station), July 21-25, 1995.
- * Short Course entitled "Ecological and Environmental Health Risk Assessment Principles, Methods and Application" Hong Kong Environmental Protection Department, Hong Kong, China, January 6-7, 1999.
- * Short Course entitled "Ecological Risk Assessment: Principles, Methods and Application. Canberra, Australia, May 8-11, 1999.
- * "Chemodynamics", Dept. Biology and Chemistry, City University of Hong Kong, January-May, 2003

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 *University*

- * Bio-safety Committee (recombinant DNA Research): 1994-
- * Management Committee, University containment facility: 1994-
- * University Hearing Board: 2003
- * Steering Committee for Review of PhD. Program in Environmental Toxicology, 2002

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.

EDITORIAL REFEREE LIST:

Editorships:

- * Editor, Environmental Toxicology and Risk Assessment Section, *Chemosphere*, Elsevier Publishers, Amsterdam, The Netherlands. 1999-Present
- * Associate Editor, *Ecotoxicology and Environmental Safety*, 2004-Present
- * Guest Editor, *Marine Pollution Bulletin*, Proceedings of 4th International Conference on Marine Pollution and Ecotoxicology, June 1-5, 2004, Hong Kong, SAR, China.
- * Associate Editor (*Ecotoxicology*, North American), *Chemosphere* Pergamon Press, Oxford, England. 1987-1999.
- * Guest Editor: **Chlorinated Dioxins and Related Compounds**. 1991. Special issue of *Chemosphere*. Vol. 24. 1992.
- * Associate Editor. **International Association for Sediment-Water Science**. 1990-Present.
- * Associate Editor for Special Publications-Biology, **Society of Environmental Toxicology and Chemistry**, Pergamon Press. 1988-Present.
- * Editorial Board: **International Society for Theoretical and Applied Limnology**: 1980-1983.
- * Editorial Panel **Office of Toxic Substances, U. S. Environmental Protection Agency**: 1980-Present.
- * Grant Review Panel, **Office of Research and Development, U. S. Environmental Protection Agency, Exploratory Research-Biology**, 1980-Present.
- * Editorial Board *The Handbook of Environmental Chemistry* series. Springer - Verlag. 1987-Present.
- * Advisory Board *The Handbook of Environmental Chemistry* series. Springer - Verlag. 2004-Present.
- * Editorial Advisory Board: *Toxicological and Environmental Chemistry*. Gordon and Breach/Scientific Publishers. London. 1989-Present.
- * Editorial Board: *Environmental Toxicology and Chemistry (Environmental Toxicology Section)*. 1988-1992.

- * Editorial Board *Advances in Trace Substances Research*, Lewis Press. 1991-Present. "Metal Ecotoxicology: Concepts and Applications, 1991".
- * **National Audubon Society**- Television Scripts and Companion Books. Reviewer
- * Editorial Board *Ecotoxicology*, Chapman & Hall, 1991-1994.
- * Editorial Board *Handbook of Ecotoxicology*, Lewis Publishers /CRC Press. 1992-Present.
- * Editorial Board: **European Journal of Pharmacology** (Elsevier; Environmental Toxicology and Pharmacology Section. 1991-Present.
- * Editorial Board: *Environmental Science and Pollution Research*. 1993-Present.
- * Editorial Board *Toxicology Modeling*. 1994-1996
- * Special Editor: *Water Science and Technology*. Proceedings Issue for ECOHAZARD>99

Editorial Referee: Manuscripts and Proposals:

- * *Air Water and Soil Pollution*: Manuscripts, 1980.
- * *Agency for Toxic Substances and Disease Registry*: Review of Interaction Profile Document for PCBs, PCDEs, PCDFs, DDT and Mercury, 2000.
- * *Alberta New Faculty Grant Program*: Reviewer, 2005
- * **Ambio**: Manuscripts, 1992.
- * **American Chemical Society**: Manuscripts, 1979-1981, annually 1983-1985.
- * **American Fisheries Society**: Manuscripts, 1977, 1980, 1982, 1985, 1986.
- * **American Institute of Biological Sciences**: Manuscripts, 1977, annually 1979-1982.
- * *American Naturalist*: Manuscripts, 1984.
- * **American Society for Testing and Materials**. *Proposed Standard Guide for: use of Bioindicators in Field Studies*: 1988.
- * *Analytical Chemistry*: Manuscripts, 2005
- * *Aquatic Toxicology and Hazard Assessment Vol. II*, ASTM. 1989.
- * *Applied and Environmental Microbiology*: Manuscripts, 1977, 1979.

- * *Aquatic Botany*: Manuscripts, 1976.
- * *Aquatic Living Resources*: Manuscripts, 1990.
- * *Aquatic Photochemistry*: Manuscripts, 1985.
- * *Aquatic Conservation: Marine and Freshwater Ecosystems*: Manuscript Review, 2001
- * *Aquatic Toxicology*: Manuscripts, 1986, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2002.
- * *Archives of Environmental Contamination and Toxicology*: **Manuscripts**, 1979, 1980, 1981, 1982, 1984, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003.
- * **Armenian-U.S. Bilateral Grants Program**:
1) Review of Proposals, 2002
- * *Atmospheric Deposition of Contaminants to the Great Lakes and Coastal Waters*. J.E. Baker (Ed.) A special publication of the Society of Environmental Toxicology and Chemistry. **Primary Reviewer**.
- * **Binational Agricultural Research and Development fund**; United States - Israel (BARD) Grant Proposals: 1985.
- * **Biological Availability of Trace Metals** - Symposium held at Battelle North West Laboratories: 1981.
- * *CALFED Bay-Delta Programs Ecological Restoration Program*: Grant proposals, 2002
- * *California Sea Grant Program*: Grant proposals, 1994
- * *Can. J. Fish. and Aquat. Sci*: Manuscripts, 1976, 1979, annually 1985-1987, 1990, 1992-1994, 1997.
- * *Biomarkers*: Manuscripts, 1999
- * **California Public Health Foundation San Francisco Bay Initiative**: Grant proposals, 1995
- * **Canadian National Sciences and Engineering Research Council**: Grant proposals 1991, annually 1992-1996.
- * **Canadian Association on Water Quality**: Grant proposals, 1996

- * **Canadian Water Network:** Grant Proposals, 2004
- * *Chemical Speciation and Bioavailability*, Editorial Board: 1988-Present.
- * **Chlorine Chemistry Council of the Chemical Manufacturer's Association:** Review of Research Project completion reports, 1999.
- * *Contaminants in the Upper Mississippi River*, J. G. Wiener (ed.): 1983.
- * *Comp. Biochem. Physiol.:* Manuscripts, 1996, 2001, 2002, 2003, 2004, 2005
- * **Connecticut Sea Grant Program:** Proposals, 1999
- * **Cottrell Research Corporation:** Document reviews, 1988.
- * **Critical Reviews in Toxicology:** Manuscripts, 1997
- * **CRC Press, Inc.** Boca Raton, FL. *Forecasting Toxicology Risk in Aquatic Ecosystems:* 1986.
- * **Czech Republic, Grant agency:** Review of Grants, 2002
- * **Department of Energy:** Grant proposals, 1974-1981, annually 1983-1985.
- * **Duke University**, Durham North Carolina, Faculty Tenure Review, 1999.
- * *Ecology:* Manuscripts, 1978, 1980, 1991.
- * *Ecotoxicology & Environmental Safety:* Manuscripts, 2004
- * **Electric Power Research Institute:** Grant proposals, 1978, annually 1980-1982.
- * *Energy and Environmental Stress in Aquatic Systems*, J. H. Thorp and J. W. Gibbons (eds.): 1977.
- * *Environment International:* Manuscripts, 2004
- * *Environmental Bioassay Techniques and Their Application*, Kluwer Scientific, Dordrecht, Netherlands. 1989.
- * *Environmental Biology of Fishes:* Manuscripts, 1979, 2003.
- * *Environmental Chemistry and Cycling Processes*, D. C. Adriano and I. L. Brisbin (eds.): 1977.
- * *Environmental Geochemistry and Health:* Manuscripts, 1993, 2001
- * *Environmental Health Perspectives:* (NIEHS) Manuscripts, 1997

- * ***Environmental Pollution***: Manuscripts, 1979, 1992-1993, 1995-1996, 2001, 2002, 2004.
- * ***Environmental Research***: Manuscripts, 1976, 2000 (2)
- * ***Environmental Science and Pollution Research***: Manuscripts, Annually, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
- * ***Environmental Science and Technology***: Manuscripts; 1984, 1985, 1987, 1988, 1989 (2), 1990, 1991 (3), 1992, 1993 (2), 1994, 1995 (2), 1996 (2), 1997 (30), 1998 (4), 1999 (4), 2000 (3), 2001 (5), 2002 (6), 2003 (11), 2004 (6), 2005 (6)
- * ***Environmental Toxicology and Chemistry***: Manuscripts, annually 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004 (10), 2005.

Editorial Board; Environmental Toxicology Section: 1988-1992.

Special Publication Committee: 1988-1991.

- * ***Environmental Toxicology and Environmental Health***: Manuscripts, 2004
- * ***Environmental Toxicology and Pharmacology***: Editorial Board, 1996-Present
Manuscripts, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004.
- * **Environment Canada:**

Review of Document entitled A Canadian Tissue Residue Guideline (TRG) for Polychlorinated Biphenyls (PCBs) for the Protection of Wildlife Consumers of Aquatic Biota. 1998

Review of document entitled A Ecological Risk Assessment of Nonylphenol and its Ethoxylates in Canada". 1999
- * **Foundation of Research, Science and Technology of New Zealand.** Grant proposals, annually, 1992-present
- * ***Freshwater Biology***: Manuscripts, 1976.
- * ***Freshwater Wetlands and Wildlife***, R. R. Sharitz and J. W. Gibbons (eds.): 1987.
- * ***Functional Testing for Hazard Evaluation***, John Wiley: 1986.
- * ***Fundamental & Applied Toxicology***: Manuscripts, 1993

- * *Geochimica and Cosmochemica Acta*: Manuscripts, 1986.
- * **Great Lakes Fishery Commission**, Technical Reports: 1990, 2004.
- * **Griffith University, Brisbane, Australia**: External Examiner, Ph.D. Dissertation, 2004
- * *Handbook of Detergents*, 2001.
- * *Handbook of Hazardous Materials*-Academic Press.
- * *Handbook of Ecotoxicology*. D.J. Hoffman, B.A. Rattner, G. Allen Burton, jr and J. Cairns, jr (Eds.). Lewis Publishers, Inc, Boca Raton, FL. **Primary Reviewer**.
- * *Handbook of Ecotoxicology Second Edition*. D.J. Hoffman, B.A. Rattner, G. Allen Burton, jr and J. Cairns, jr (Eds.) Lewis Publishers, Inc, Boca Raton, FL. **Primary Reviewer**. 2002
- * **Health Council of the Netherlands**:

Reviewer of Ecologically Based Recommended Exposure Limits for PCBs in Soils and Sediment, 2004
- * **Hudson River Research Foundation**: Grant proposals: 1985, 1994-1997.
- * **Human and Ecological Risk Assessment**:

Reviewer of papers for the special issue entitled "Endocrine Disruptors", 2000.
- * *Hydrobiologica*: Manuscripts, 2000
- * **Idaho State Department of Education**. Grant proposals: 1993.
- * **Indiana - Illinois Sea Grant Program**: Grant proposals - 1987.
- * *Influence of Aquatic Humic Substances on Fate and Treatment of Pollutants*, ACS Symposium: 1987.
- * **Institute of Water Research, Department of Interior**, Annual Allotment Grant proposals: 1984.
- * **International Water Association**:

(1) Peer Reviewer of Materials for the 2002 IWA Third World Congress and Journals.

- * **International Joint Commission** - Review of *Manual for Assessing Areas of Concern*: 1985.
- * ***International Journal of Environmental Health Research***: Manuscripts, 2005
- * ***International Symposium on the Fate and Effects of Toxic Chemicals in Large Rivers and Their Estuaries***, Quebec City, Canada, October, 1988.
- * ***Journal of Chromatography***: Manuscripts, 2005
- * ***Journal of Environmental Quality***: Manuscripts, 1995, 2002, 2003
- * ***Journal of Environmental Science and Health***: Manuscripts, 1990.
- * ***Journal of Environmental Engineering and Science***: Manuscripts, 2003
- * ***Journal of Experimental Marine Biology***: Manuscripts, 2002
- * ***Journal of Great Lakes Research: Manuscripts***: 1992, 1995, 1996, 1997, 2000, 2001.
- * ***Journal of Shellfish Research***: Manuscripts, 2003
- * ***Journal of Toxicology and Environmental Health***: Manuscripts, 1996, 2004
- * ***Limnology and Oceanography***: Manuscripts, 1978.
- * ***Lakes and Rivers***: Editor of Special issue of proceedings of symposium entitled "Toward Sustainable Management of Lake-Watershed Ecosystems". Hikone, Japan, July 2001.
- * ***Marine Chemistry***: Manuscripts, 1988.
- * ***Marine Environmental Research***: Manuscripts, 1989, 1994.
- * ***Memorie dell' Istituto Italiano di Idrobiologia***: Manuscripts, 1993
- * ***Marine Pollution Bulletin***: Manuscripts, 2003
- * **Michigan State University**

Office of Vice President for Research: Grant proposals, All University Research Grants: annually 1981-1998.

Office of Vice President for Research: Incubator Research Grant Program, 1999

- * **Microscale Aquatic Toxicology-Advances, Techniques and Practice** P.G. Wells, K. Lee and C. Blaise (eds.): 1996
- * ***Mineral Cycling in Southeastern Ecosystems***, F. G. Howell, J. B. Gentry and M.H. Smith (eds.): 1974.
- * **Minnesota Sea Grant College Program**: Grant proposals, 1995
- * **MONTS; Montanans on a new Trace for Science, University of Montana**: Grant proposals, 1988.
- * **MSU/Center for Environmental Toxicology/U. S. Department of Agriculture**: Grant proposals, Dioxins in the Great Lakes Food Chain, 1984.
- * **National Aeronautics and Space Administration**: Grant proposals, annually 1980-1982.
- * **National Environmental Research Council (NERC) of the United Kingdom**: Grant Proposals, 2003
- * **National Institutes of Environmental Health, Environmental Toxicology Program**,: Manuscript review, 2003
- * **National Science Foundation**: Grant proposals, 1976, annually, 1978-1984, 1986-1988, 1991-1996, 2000, 2003
- * **National Sciences and Engineering Research Council of Canada (NSERC)**. Grant proposals, Annually, 1990-1996, 1998, 2001, 2002, 2003
- * **National Oceanic and Atmospheric Administration**; National Sea Grant Program: Grant proposals, annually 1980-1983, 1989.
- * **National Toxicology Program, National Institutes of Health**-
Reviewer of technical reports on the toxicology of:
 - (1) 3,3',4,4'-Tetrachloroazoxybenzene (1998)
 - (2) 3,3',4,4'-Tetrachloroazobenzene (1998)
- * **National Undersea Research Center, University of Connecticut**- Grant Proposals, 1984
- * **Natural Environmental Research Council**, United Kingdom: Grant proposals, 2000, 2001, 2002, 2005
- * **Nature**: Manuscripts, 1980.

- * **Netherlands Health Council, 2002**
 - (1) Review of method for the development of environmental risk limits for PCBs in the environment
- * **New York Sea Grant Institute:** Grant proposals, 1988, 1989, 1991
- * **New Zealand Foundation for Research Technology:** Grant proposals, Annually, 1992-1996.
 - Antarctic Institute: Grant proposals, 1997
 - Public Good Science Fund, Environmental Grant proposals, 1998
- * **Netherlands Life Science Foundation:** Grant proposals, 1997, 1998
- * **Netherlands Institute of Public Health and Environment (RIVM), Bilthoven**
 - (1) Review of the document entitled “Recommended Exposure Limits for Polychlorinated Biphenyls in Soils and Sediments, for the Protection of Ecosystems”, 2003
- * ***Oecologia:*** Manuscripts, 1979.
- * **Ohio Board of Regents**
 - (1) Reviewer of proposals for the Eminent Scholar Program at Ohio Universities, 2000.
- * **Oregon Sea Grant Program:** Grant proposals, 1997
- * **Organization of Economic Cooperation and Development:**
 - (1) Review of UK Risk Reduction Strategy and Advantages and Drawbacks for Perfluorinated Sulfonate (PFOS), 2003
- * ***Pesticide Biochemistry and Physiology:*** Manuscripts, 1991.
- * ***Phycologia:*** Manuscripts, annually 1975-1978.
- * ***Polar Biology:*** Manuscripts, 1998.
- * ***Quantitative Ecology: A Hierarchical Approach, Lewis Publishers,*** 1994
- * ***Quantitative Methods in Aquatic Toxicology, Lewis Publishers,*** 1995
- * **Rutgers University, Dept. Environmental Sciences, Cook College,** Reviewer for faculty promotion and tenure, 1998

- * ***SAR and QSAR in Environmental Research***: Manuscripts, 1993.
- * ***Science***: Manuscripts, 1979, 1981-1983.
- * ***Science of the Total Environment***: Manuscripts, 1989, 1990, 1994, 1996, 1998.
- * ***Screening and Testing Chemicals in Commerce***: Background papers for Office of Technology Assessment, US Congress, 1994
- * ***Sediment/Water Interactions-V***. Developments in Hydrobiology Series. Kluwer Academic Publishers. 1992.
- * **Sea Grant Program (National; NOAA):** .
 - 1) Review of Proposals, 1992
 - 2) Program Review, Chesapeake Bay Toxics Program, 1993.
- * **SETAC Press, Pensacola, FL**: Review of Book Chapter, 2004
- * **Springer Publishers, New York, NY**:
 - 1) Review of "Trace Elements in Terrestrial Environments: Biochemistry, Bioavailability, and Risks of Metals", 2000.
- * **State University of New York-Albany**
 - 1) External reviewer, Ph.D. student committee, 2003-Present
- * **Swedish National Museum of Natural History, Stockholm, Sweden**
 - 1) Review of Research Division, 2002.
- * **Swiss National Scientific Research Organization**: Grant proposals, 1992.
 - 1) Review of proposals for program in "Endocrine Disruptors: Relevance to Humans, Animals and Ecosystems". 2001, 2002, 2003
- * **Talanta**
 - 1) Reviewer of Manuscripts: 2003
- * **Telaviv University, George S. Wise Faculty of Life Sciences**: External examiner, promotion and tenure, 1998
- * **Texas Tech University**: Promotion and Tenure Reviews, 2002, 2003
- * **The Auk**: Manuscripts; 2003

- * **The Universities Council on Water Resources, Inc:** Grant proposals, 1985, 1990, 1991.
- * *The Analyst*, Manuscripts: 2003
- * *Toxic Substances and Aquatic Ecosystem Health*, M. S. Evans (ed.). In John Wiley Advances in Environmental Science and Technology: 1985.
- * **Trout Unlimited: Grant proposals, 1987.**
- * **Universal Energy Systems; Department of Defense:** Grant proposals, 1985.
- * **U. S. Fish and Wildlife Service - Columbia Laboratory:** Grant proposals, 1984.
- * *Toxic and Hazardous Substance Control:* Manuscripts, 1990.
- * *Toxicology and Applied Pharmacology:* Manuscripts, 1985.
- * *Toxicological and Environmental Chemistry:* Manuscripts, 1987, 1898, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2000, 2001, 2002, 2003, 2004, 2005
- * *Toxicology Letters:* Manuscript Review, 2004
- * *Toxicological Sciences:* Manuscripts, 1999-2000, 2003, 2004, 2005 (2)
- * **US Civilian Research and Development Foundation:** Grant Proposals, 2003
- * **US Dept. Agriculture:** Proposals
 - (1) Water Resources Assessment and Protection Program: Grant proposals, 1996, 1997, 1998, 1999
 - (2) Ecosystem Science Program, 1999
 - (3) Watershed Processes and Water, 2000
 - (4) Small Business Innovation program, 2000
 - (5) Soils and Soil Biology Program, 2001
- * **US Environmental Protection Agency:** Reviewer, 2000
 - (1) “Acute to Chronic No-Observable-Effect Concentration Software (ACE) for the Windows Environment”

- * **US Environmental Protection Agency:** Reviewer for promotion of Laboratory personnel, 2002
- * **US Environmental Protection Agency:**
 - (1) Grant proposals, annually 1975-1988.
 - (2) Promotion of Research Scientist, 1998
- * **United States-Israel Binational Science Foundation:** Grant proposals, 2001.
- * **University of Aachen, Germany:** External Examiner for Promotion, Biology Department
- * **University of Albany, SUNY:** Review of Faculty for promotion: 1994
- * **University of Agriculture of Malaysia:** External Assessor. 1990-1993.
- * **University of California - Davis, Ecotoxicology Program:** External Review Panel. 1994.
- * **University of California - Riverside Environmental Sciences Program:** External Reviewer for faculty search committee
- * **University of California -Santa Cruz:** External reviewer for promotion and tenure, 1997
- * **University of Guelph:** External examiner for Ph.D. Dissertation, 1998
- * **University of Helsinki:** External Examiner, Ph.D. Dissertation, 2004
- * **University of Toledo Internal Grants Program:** Grant proposals, 1989.
- * **University of Toronto:** Promotion and Tenure review, 2004
- * **University of Waterloo, Waterloo Ontario:** Promotion & Tenure Review, 1999
- * **United States Conference of Mayors:**
 - (1) Review of document on dioxins in soils due to use of urban bio-solids as a soil amendment, 1998.
- * ***Water Air and Soil Pollution:*** Manuscripts, 1996
- * ***Water Quality Research Journal of Canada:*** Manuscripts, 2000
- * ***Water Research:*** Manuscripts, 1976, 1979, 2000.

- * *Water Science and Technology*: Manuscripts, 2003
- * **University of Wageningen, Graduate School of Environmental Chemistry and Toxicology**, Wageningen, The Netherlands. Program review, 1999
- * **William and Mary University, Institute of Marine Science, Department of Fisheries Science**, faculty promotion and tenure, 1998.

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. Tel Aviv University, Tel Aviv, Israel. 1998

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 Counselor: 1983-Present.
 - Bird Study
 - Chemistry
 - Fish and Wildlife Management
 - Nature
 - Environmental Science

*** Ducks Unlimited**

- Red Ceder 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.

PUBLICATIONS:

Professor Giesy has published 540 peer-reviewed works: 3 theses, 7 books written, 7 books edited, 1 textbook chapter, 73 book chapters, 398 peer-reviewed open literature journal articles, 4 feature articles, 4 published reviews, 23 published reports and 20 special reports.

THESES AND DISSERTATIONS:

- (T-1) Giesy, J. P. 1970. *The Effects of the Alma - St. Louis, Michigan Metropolitan Area on the Benthic Organisms of the Pine River*. B. S. Thesis, Alma College. 35 p.
- (T-2) Giesy, J. P. 1971. *Estimation of Bottom Area in an Artificial Stream, Using Phosphorus-32*. M. S. Thesis, Michigan State University. 71 p.
- (T-3) Giesy, J. P. 1974. *The Effects of Humic Acids on the Growth of an Uptake of Iron and Phosphorus by Scenedesmus obliquus*. Ph.D. Dissertation, Michigan State University.

BOOKS WRITTEN:

- (B-1) Delzell, E., J. Doull, J.P. Giesy, D. Mackay, I.C. Monro and G.M. Williams. 1994. *Interpretive Review of the Potential Adverse Effects of Chlorinated Organic Chemicals on Human Health and the Environment*. *Regulatory Toxicology & Pharmacology*. Special Supplement to Vol. 20 No. 1 Part 2 of 2 parts. Academic Press, Inc. New York, 1056 p.
- (B-2) Knobil, E., H.A. Bern, J. Burger, D.M. Fry, J.P. Giesy, J. Gorski, C.J. Grossman, L.J. Guillette, B.S. Hulka, J.C. Lamb, J.A. McLachlan, L.A. Real, S.H. Safe, A.M. Soto, J.J. Stegeman, S.H. Swan, F.S. von Saal. 1999. *Hormonally Active Agents in the Environment*. Committee on Hormonally Active Agents in the Environment, Board on Environmental Studies and Toxicology, Commission on Life Sciences, National Research Council, National Academy Press, Washington, DC. 430 p.
- (B-3) Giesy, J.P., K.R. Solomon, J.R. Coats, K.R. Dixon, J.M. Giddings and E.K. Kenega. 1999. *Ecological Risk Assessment of Chlorpyrifos in North American Aquatic Environments*. Springer-Verlag, Heidelberg, Germany, 129 p.
- (B-4) Henderson, R., M.W. Bell, J.F. Borzelleca, E.H. Clark, II, E.A.C. Crouch, J.P. Giesy, P.B. Ryan, J.N. Seiber and C.C. Travis. 1999. *Risk-Based Waste Classification in California*. National Academy Press, Washington, D.C. 219 p.
- (B-5) Farrington, J.F., R.C. Loehr, E.L. Anderson, W.F. Bohlen, Y. Cohen, K.J. Farley, J.P. Giesy, D.S. Henshel, S.U. Lester, K.J. Liegel, P.L. McCarty, J.L. O'Donoghue, J.J. Opaluch and D.D. Reible. 2001. *Risk Reduction Strategy for PCB-Contaminated Sediments*. National Academy Press, Washington, DC. 432p.

- (B-6) Anon. 2002. Global Assessment of the State-of-the-Science of Endocrine Disruptors: An Assessment Prepared by an Expert Group on Behalf of the World Health Organization, the International Labour Organization and the United Nations Environment Programme. World Health Organization, Geneva. WHO/PCS/EDC/02.2. 180pp.
- (B-7) Luthy, R.G., R.M. Allen-King, S.L. Brown, D.A. Dzombak, S.E. Fendorf, J.P. Giesy, J.B. Hughes, S.N. Luoma, L.A. Malone, C.A. Menzie, S.M. Roberts, M.V. Ruby, T.W. Schultz and B.F. Smets. 2003. Bioavailability of Contaminants in Soils and Sediments: Processes, Tools and Applications. National Academy Press, Washington, DC. 420p.

BOOKS EDITED:

- (BE-1) Giesy, J. P. (ed.). 1980. *Microcosms in Ecological Research*. Department of Energy Symposium Series #52 CONF-781101, National Technical Information Center, Springfield, VA, 1112 p.
- (BE-2) Baudo, R., J. Giesy and H. Muntau (eds.). 1990. *Sediments: The Chemistry and Toxicology of In-Place Pollutants*. Lewis Publishers. Chelsea, Mich. 405 p.
- (BE-3) Hart, B.T., P. Sly, R. Beckett, W. Calmano, J.P. Coakley, B.J. Eadie, J.P. Giesy, M. Jansson, L. Kamp-Nielsen, G. Morrison S.S. Rao, D. Walling and B. Boström (Eds.). 1992. *Sediment/Water Interactions: V-Developments in Hydrology*. Kluwer Academic Publishers, Dordrecht, The Netherlands. 743 p.
- (BE-4) Christensen, E., D. Edgington and J.P. Giesy (Eds.). 1994. *Contaminated Aquatic Sediments: Proceedings of the First International Specialized Conference on Contaminated Aquatic Sediments: Historical Records, Environmental Impact, and Remediation*. Pergamon Press, Oxford, UK, 389 p.
- (BE-5) Carey, J., P. Cook, J. Giesy, P. Hodson, D. Muir, W. Owens and K. Solomon (Eds.). 1998. *Ecological Risk Assessment of The Chlorinated Organic Chemicals*. SETAC Press, Pensacola, FL. 375 p.
- (BE-6) Kendall, R.J., R.L. Dickerson, J.P. Giesy, and W.A. Suk (Eds.). 1998. Principles and Processes for Evaluating Endocrine Disruptors in Wildlife. SETAC Press, Pensacola, FL, 491 p.
- (BE-7) Wu, R. B. Richardson, D. Connell, J. P. Giesy, M. Moore, D. Randall and S. Tanabe. 2002. Proceedings of the Third International Conference on Marine Pollution and Ecotoxicology, 10-14 June, 2001, Hong Kong, China. Pergamon Press, Oxford, Unkited Kingdom. 402 P.

TEXTBOOKS:

- (TB-1) Graney, R.L., J.P. Giesy and J.R. Clark. 1995. Field Studies. In: *Fundamentals of Aquatic Toxicology: Effects, Environmental Fate and Risk Assessment* (2nd edition). G. M. Rand (Editor), pp. 257-305, Taylor & Francis, Bristol, PA.

BOOK CHAPTERS:

- (BC-1) Hypothetical Framework. 1977. Pp 1-34 in J. W. Gillett and J. M. Witt (Eds.). *Terrestrial Microcosms: the proceedings of the workshop on terrestrial microcosms*. NSF/RA 790034.
- (BC-2) Giesy, J. P., D. 237. Paine and L. Hersloff. 1977. Effect of naturally occurring organics on ²³⁷Pu uptake by algae and bacteria. pp. 531-543 in White, M. G. and P. B. Dunaway (Eds.). *Dynamics of transuranics in terrestrial and aquatic environments*. Nevada Applied Ecology Group Symposium: National Technical Information Center, Springfield, VA.
- (BC-3) Skinner, S. P., J. B. Gentry and J. P. Giesy. 1978. Cadmium dynamics in terrestrial food webs of a coal fly ash basin. pp. 658-672 in D. C. Adriano and I. L. Brisbin, Jr. (Eds.). *Environmental Chemistry and Cycling Processes*. ERDA Symposium Series. (CONF-760429).
- (BC-4) Evans, D. W. and J. P. Giesy. 1979. Trace Metal Concentrations in a Stream-Swamp System Receiving Coal Ash Effluent. pp. 782-790 in: M. K. Wali (Ed.). *Ecology and Coal Resource Development*. Pergamon Press, New York.
- (BC-5) Giesy, J. P., N. H. Cutshall, L. L. King, R. E. Akutani and A. L. Reeves. 1979. Barium. pp. 19-26 in: R. V. Thurston, R. C. Russo, C. M. Fetterolf, Jr., T. A. Edsall and Y. M. Barber, Jr. (Eds.). *A Review of the EPA Red Book: Quality Criteria for Water*. Water Quality Section, American Fisheries Society, Bethesda, Maryland.
- (BC-6) Giesy, J. P. 1980. Cadmium interactions with naturally occurring organic ligands. pp. 237-256 in J. O. Nriagu (Ed.). *Cadmium in the Environment, Part I*. John Wiley and Sons, Inc., New York.
- (BC-7) Giesy, J. P. and E. P. Odum. 1980. Microcosmology: The theoretical basis. pp. 1-13 in J. P. Giesy (Ed.). *Microcosms in Ecological Research*. DOE CONF-781101. Department of Energy Technical Information Center, Oak Ridge, TN.
- (BC-8) Giesy, J. P. and R. A. Geiger. 1980. LargeScale Microcosms for Assessing Fates and Effects of Trace Contaminants. pp. 304-318 in J. P. Giesy (Ed.). *Microcosms in Ecological Research*. DOE CONF-781101. Department of Energy Technical Information Center, Oak Ridge, TN.

- (BC-9) Bowling, J. W., J. P. Giesy, H. J. Kania and R. L. Knight. 1980. The realities of using large-scale microcosms in assessing the fates and effects of potentially hazardous trace contaminants. pp. 224-247 in J. P. Giesy (Ed.). ***Microcosms in Ecological Research***. DOE CONF-781101 Department of Energy Technical Information Center, Oak Ridge, TN.
- (BC-10) Landrum, P. F. and J. P. Giesy. 1981. Anomalous breakthrough of benzo(a)pyrene during concentration with Amberlite XAD-4 resin from aqueous solutions. pp 345-355(Chapter 22) in L. H. Keith (Ed.). ***Advances in the Identification and Analysis of Organic Pollutants in Water***. Ann Arbor Science, New York.
- (BC-11) Leversee, G. J., J. P. Giesy, P. F. Landrum, S. Gerould, M. Bruno A. Spacie, S. Bartell, J. Bowling, J. Haddock and T. Fannin. 1981. Disposition of benzo(a)pyrene in aquatic systems components: periphyton, chironomids, fish. pp. 357-366 in ***Proceedings 5th International Symposium on Polynuclear Aromatic Hydrocarbons***. Battell Columbus Laboratories, Columbus Ohio.
- (BC-12) Bartell, S. M., P. F. Landrum, J. P. Giesy and G. J. Leversee. 1981. Simulated transport of polycyclic aromatic hydrocarbons in artificial streams. pp. 133-142 in W. J. Mitsch, R. W. Bosserman and J. M. Klopatek (Eds.). ***Energy and Ecological Modeling***, Elsevier, New York.
- (BC-13) Bartell, S. M., P. F. Landrum, J. P. Giesy and G. J. Leversee. 1981. Simulated transport of polycyclic aromatic hydrocarbons in artificial streams. pp. 1-31 in ***Proceedings of the International Symposium on Energy and Ecological Modeling***, Louisville, Kentucky, April 20-23, 1981,
- (BC-14) Giesy, J. P., A. Newell and G. J. Leversee. 1983. Copper speciation in soft-organic acid waters: effects on accumulation by and toxicity to *Simocephalus serrulatus* (Daphnidae) in E. A. Jenne and R. Wildung, (Eds.). ***Biological Availability of Trace Metals***. Special Issue of *Science of the Total Environment* 28:23-36 Elsevier, Amsterdam.
- (BC-15) Giesy, J.P. 1983. Biological control of trace metal equilibria in surface waters. pp. 195 - 210 in G. G. Leppard (Ed.). ***Trace Element Speciation in Surface Waters and its Ecological Implications***. North Atlantic Treaty Organization Science Office, Plenum Press, New York, NY.
- (BC-16) Alberts, J. J. and J. P. Giesy. 1983. Conditional stability constants of trace metals and naturally occurring humic materials: their application in equilibrium models and verification with field data. pp. 333-348 in R. F. Christman and E. Gjessing (Eds.). ***Terrestrial and Aquatic Humic Materials***. Ann Arbor, Science, Ann Arbor, Michigan.
- (BC-17) Giesy, J. P. and J. J. Alberts. 1984. Trace Metal speciation: The Interaction of metals with organic constituents of surface waters. pp.-1 to 11-31 in B. J. Ward (Ed.).

Effects of Trace Elements on Aquatic Ecosystems. Electric Power Research Institute. Palo Alto, CA,

- (BC-18) Giesy, J. P. 1985. Multispecies Tests: Research Needs to assess the Effects of Chemicals on Aquatic Life. pp 67-77 in R.C. Bahner and D.J. Hansen (Eds.). ***Aquatic Toxicology and Hazard Assessment***. American Society for Testing and Materials, Philadelphia, PA. ASTM STP 981.
- (BC-19) Giesy, J. P. and P. M. Allred. 1985. Replicability of aquatic multispecies test systems. pp. 187-247 in J. Cairns, (Ed.). ***Multispecies Toxicity Testing***. Pergamon Press, New York.
- (BC-20) Oris, J. T., J. P. Giesy, P. M. Allred, D. W. Grant and P. F. Landrum. 1984. Photoinduced toxicity of anthracene in aquatic organisms: An environmental perspective. pp. 639-658 in T. N. Veziroglu (Ed.). ***The Biosphere: Problems and Solutions***. Elsevier Science Publishers, Amsterdam.
- (BC-21) Giesy, J. P. 1985. Multispecies Tests: Research needs to assess the effects of chemicals on aquatic life. pp. 67-82 in R. C. Bahner and D. J. Hansen (Eds.). ***Aquatic Toxicology and Hazard Assessment***, 8th Volume ASTM, STP 891. American Society for Testing and Materials, Philadelphia, PA.
- (BC-22) Landrum, P. F., J. P. Giesy, J. T. Oris and P. M. Allred. 1986. The photo-induced toxicity of polycyclic aromatic hydrocarbons to aquatic organisms. pp. 304-318 in J. H. Vandermeulen and S. Hrudey (Eds.). ***Oil in Freshwater Chemistry, Biology, Counter Measure Technology***. Pergamon Press, New York.
- (BC-23) Giesy, J. P., D. J. Versteeg and R. L. Graney. 1988. A review of selected clinical indicators of stress-induced changes in aquatic organisms. pp. 169-200 in M. S. Evans (Ed.). ***Toxic Contaminants and Ecosystem Health: A Great Lakes Focus***. John Wiley and Sons, New York.
- (BC-24) Versteeg, D. L., R. L. Graney and J. P. Giesy. 1987. Field utilization of clinical measures of xenobiotic stress in aquatic organisms. pp. 289-306 in W. J. Adams, G. A. Chapman, and W. G. Landis, (Eds.). ***Aquatic Toxicology and Hazard Assessment: 10th Volume***, ASTM STP 971, American Society for Testing and Materials, Philadelphia, PA.
- (BC-25) Giesy, J. P. 1987. Current status of metal speciation studies. pp. 225-242 in J. W. Patterson and R. Passino (Eds.). ***Metal, Speciation, Separation and Recovery***. Lewis Publishers, Chelsea, MI.
- (BC-26) Giesy, J. P. 1988. Variation in quantification of concentrations of toxic chemicals in fish from the Laurentian Great Lakes: The good, the bad and the manageable. pp. 5-23 in N. W. Schmidtke (Ed.). ***Toxic Contamination in Large Lakes. Volume I. Chronic Effects of Toxic Contaminants in Large Lakes***. Proceedings of the

World Conference on Large Lakes, Mackinaw Island, MI., 1986. Lewis Publishers, Chelsea, MI.

- (BC-27) Graney, R. A., J. P. Giesy and D. DiToro. 1988. Mesocosm experimental design strategies: advantages and disadvantages in ecological risk assessment. pp. 74-88 in J. Reese Voshell, Jr. (Ed.). *Using Mesocosms to Assess the Aquatic Ecological Risk of Pesticides: Theory and Practice*. Entomological Society of America. Miscellaneous Publication NO. 75.
- (BC-28) Gala, W. R. and J. P. Giesy. 1989. Flow cytometric techniques to assess toxicity to algae. pp. 237-246. in W. Landis and W. Van Der Schaile (Eds.). *Aquatic Toxicology and Hazard Assessment*. Thirteenth Volume ASTM, STP 1096. American Society for Testing and Materials, Philadelphia, PA.
- (BC-29) Giesy, J. P. and R. A. Hoke. 1990. Freshwater sediment quality criteria: toxicity bioassessment. pp. 265-348 in R. Baudo, J. Giesy and H. Muntau (Eds.). *Sediments: The Chemistry and Toxicology of In-Place Pollutants*. Lewis Publishers, Chelsea, Michigan.
- (BC-30) Reijnders, P., J.P. Giesy, G.T. Ankley, P. Matthiessen and M. Depledge. 2002. Wildlife. in **Global Assessment of the State-of-the-Science of Endocrine Disruptors (EDCs)**. World Health Organization/United Nations Environment Programme, International Programme of Chemical Safety, Geneva, Switzerland.
- (BC-31) Giesy, J. P. and R. L. Graney. 1989. Recent developments in and intercomparisons of acute and chronic bioassays. pp. 21-60 in M. Munawar, G. Dixon, C. I. Mayfield, T. Reynoldson and M. H. Sadar (Eds.). *Environmental Bioassay Techniques and Their Applications*. Kluwer Academic Press, Hingham, MA.
- (BC-32) Giesy, J. P. and J. J. Alberts. 1989. Conditional stability constants and binding capacities of copper (II) by ultrafilterable material isolated from surface waters of Wyoming, USA. pp. 659-679 in M. Munawar, G. Dixon, C. I. Mayfield, T. Reynoldson and M. H. Sadar (Eds.). *Environmental Bioassay Techniques and Their Applications*. Kluwer Academic Press, Hingham, MA.
- (BC-33) Williams, L. L. and J. P. Giesy. 1990. Selective enrichment of coplanar polychlorinated biphenyls in Lake Michigan chinook salmon: A comparison of calculation methods. pp. 401-404 in O. Hutzinger and H. Fiedler (Eds.). *Toxicology-Environment, Food and Exposure Risk for Halogenated Hydrocarbons*. ECO-INFORMA Press, Bayreuth, Germany.
- (BC-34) Poppenga, R. H., B. J. Thacker, J. P. Giesy, C. Weis and J. M. Lavelle. 1991. Bioavailability of lead in mining wastes: an oral intubation study in young swine. pp. 105-111 in *Science Review Proceedings of Bioavailability and Dietary Exposure of Lead*. Sept. 24-27, 1990, Chapel Hill, N.C.

- (BC-35) Ludwig, J. P., M. E. Ludwig, H. J. Auman, P. D. Jones, J. P. Giesy, D. Verbrugge, B. Chisholm and W. Swain. 1992. The uptake of toxic contaminants by double-crested cormorants, Caspian terns and herring gulls from forage fish in the upper Great Lakes: The Basis of a Model for Great Lakes Fish-eating Warm-blooded Wildlife Species. *Proceedings of Cause-Effects Linkages in the Great Lakes*. Lewis Press, Chelsea, MI.
- (BC-36) Gillman, A., P. Beland, T. Colborn, G. Fox, J. Giesy, J. Hesse, T. Kubiak and D. Piekavz. 1991. Environmental and wildlife toxicology of exposure to toxic chemicals. pp.61-69. in R.W. Flint and J. Vena (Eds.). *Human Health Risks from Chemical Exposure: The Great Lakes Ecosystem*. Lewis Publishers, Inc. Chelsea, MI.
- (BC-37) Graney, R.L., J.P. Giesy and J.R. Clark. 1992. Natural and Simulated field tests. pp. 257-305 (Chapter 9) in G. Rand (Ed.). *Fundamentals of Aquatic Toxicology: Effects, Environmental Fate and Risk assessment*. Second Edition. Hemisphere publishers, New York.
- (BC-38) Bowerman, W.W., D.A. Best, E.D. Evans, S. Postupalsky, M.S. Martel, K. Kozie, R.L. Welch, R.H. Schell, D.F. Darling, J.C.Rogers, T.J. Kubiak, D.E. Tillitt, T.R. Schwartz, P.D. Jones and J.P. Giesy. 1990. PCB Concentration in Plasma of Nestling Bald Eagles from the Great Lakes Basin, North America. pp. 203-206 in O. Hutzinger and H. Fiedler (Eds.). *Toxicology- Environment, Food, and Exposure Risk for Hhalogenated Hydrocarbons*. ECO-INFORMA Press, Bayreuth, Germany.
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- (1) "Seeking a Measure of Safety". About J. P. Giesy research programs. *Futures*; Summer, 1986, MSU Experiment Station.

FEATURE RADIO AND TELEVISION APPEARANCES:

- (1) "Effects of Toxic Substances in Great Lakes Birds." J. P. McCarthy Morning Show, WJR, Detroit. Nov. 21, 1988.
- (2) "Toxics in the Great Lakes". Syndicated broadcast. Dennis Krolik, Nov. 21, 1988, WKAR, E. Lansing.
- (3) "Environmental Contaminants" Newstalk-870 (Call-in Question and Answer Show) WKAR, E. Lansing, MI. 1989.
- (4) "Environmental trends in the Great Lakes". Special earthday edition of the *Focus Show*, WJR, Detroit, 1990.
- (5) "Organochlorines in the New Zealand Environment". IWI Radio, 94.8, Wakatane, New Zealand, 1998
- (6) "Organochlorines in the New Zealand Environment", ASunday Morning with Linda Skates", New Zealand Public Radio, 1998.
- (7) "Dioxins in the Environment". Japanese National Television (NHK), 2000
- (8) "Endocrine Disruptors in the Environment". Japanese National Radio, 2000
- (9) "Contaminants in the Sea. Japanese National Television, 2001"
- (10) "Michigan at Risk: Contaminants in the Great Lakes", WKAR, Lansing, MI, 2001

TESTIMONY TO STATE AND FEDERAL GOVERNMENT:

- (1) "Effects of Toxic Chemicals on Fish, Birds, Wildlife and Human Health Advisories in the Great Lakes Region". To: Director of Michigan Department of Natural Resources, Lansing, MI. June, 1989.
- (2) "Distribution, Effects and Monitoring of Contaminants in the Great Lakes". To: US Senate Subcommittee on Oversight for Governmental Management, Senators C. Levin, (D-MI) and H. Kohl (D-WI) co-conveners, Washington, DC. June, 1989.
- (3) "Effects of Toxic Chemicals on Wildlife of the Great Lakes and Toxicity of Sediments". To: Water Resources Subcommittee of the Public Works Committee, US House of Representatives, Representative, H. J. Nowak (D-NY) convener. June, 1989.
- (4) "Fish Consumption Advisories for the Great Lakes". To: Tourism, Fish and Wildlife Committee, Michigan House of Representatives. Representative J. Barnick Presiding. October, 1989.
- (5) "Research Priorities of the Clean Water Reauthorization Act of 1991". To: U.S. House of Representatives, Science Committee, Subcommittee on Environment, Representative Brown Presiding. June, 1991.
- (6) "Effects of chlorinated compounds in the environment". To: U.S. House of Representatives, Science Committee, Representative Brown Presiding, May, 1994.
- (7) "Effects of chlorinated compounds in the environment". To: U.S. Senate, Committee on Public Works and Environment, Senator Baccus, Presiding, May 1994.
- (8) "Chlorinated Hydrocarbons in the Environment: Approaches for Control of Risks". To: White House Office of Science and Technology Policy, August 3, 1994, Washington, D.C.

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- (PR-1) Giesy, J.P., H.J. Kania, J.W. Bowling, R.L. Knight, S. Mashburn and S. Clarkin. 1979. ***Fate and Biological Effects of Cadmium Introduced into Channel Microcosms.*** EPA Ecological Research Series. Environmental Protection Agency, Environmental Research Laboratory, Athens, GA, EPA-600/3-79-039, 157 p.
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- (PR-3) Giesy, J.P., S.M. Bartell, P.F. Landrum, G.J. Leverssee and J.W. Bowling. 1983. ***Fates and Biological Effects of Polycyclic Aromatic Hydrocarbons in Aquatic Systems.*** Project Summary. U. S. EPA-600/53-83-053. 5 p.
- (PR-4) Giesy, J.P. and R.A. Hoke. 1988. ***Toxicity of Sediment from Western Lake Erie and the Maumee River at Toledo, Ohio, 1987.*** US Army Corps of Engineers, Buffalo District Office, Buffalo, NY. 77 p.
- (PR-5) Giesy, J.P. 1988. Detroit River Sediment Toxicity. In: ***Integrated Study of Exposure and Biological Effects of In-Place Pollutants in the Upper Connecting Channels: Interim Results.*** R. G. Kreis (ed.) U.S. EPA Office of Research and Development Environmental Research Laboratory - Duluth Minnesota, Large Lakes Research Station - Grosse Ile, Michigan.
- (PR-6) Tillitt, D.E., G.T. Ankley, J.P. Giesy and N.R. Kevern. 1988. ***H4IIE Rat Hepatoma Cell Extract Bioassay-Derived 2,3,7,8-Tetrachlorodibenzo-p-dioxin equivalents (TCDD-EQ) from Michigan Waterbird Colony Eggs, 1986 and 1987.*** Michigan Department of Natural Resources, Toxic Substances Control Commission, Lansing, MI. 63 p.
- (PR-7) Williams, L.L., J.P. Giesy, N. DeGalan, D.A. Verbrugge, D.E. Tillitt and G.T. Ankley. 1989. ***Size and Seasonal Variations of PCBs in Chinook Salmon (Oncorhynchus tshawytscha) Fillets from Lake Michigan, USA.*** MSUATL-1989-1, Michigan State University, E. Lansing, MI. 53 p.
- (PR-8) Tillitt, D. E., G. T. Ankley, J. P. Giesy and N. R. Kevern. 1989. ***The use of the H4IIE rat hepatoma cell assay for the calculation of 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents in environmental samples.*** U.S. Fish and Wildlife Service/U.S. Dept. Interior. Cooperative Agreement 14-6-0003-87-943, 43p.

- (PR-9) Giesy, J. P., R. A. Othout, K. R. Grzyb, D. A. Verbrugge, R. A. Hoke and J. B. Drake. 1989. *Evaluation of the effects of storage time on the toxicity of sediments*. U.S. Army Corps of Engineering, St. Paul District Office, U.S. Department of Defense, MSUATL-2989-2, Michigan State University, E. Lansing, MI, 106p.
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- (PR-12) Giesy, J.P. 1990. An Enzyme Induction Bioassay Technique. In: M. Mac (Ed.) *Proceedings of the Round Table on Contaminant-Caused Reproductive Problems in Salmonids*, Windsor, Ontario. Sept. 24-25, 1990.
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- (PR-15) Carey, J., P. Cook, J. Giesy, P. Hodson, D. Muir, W. Owens and K. Solomon (Eds.) 1996. *Ecological Risk Assessment of the Chlorinated Organic Chemicals*
- (PR-16) Giesy, J.P., K.R. Solomon, J.R. Coats, K. Dixon, J. Giddings and E. Kenaga. 1998. Ecological Risk Assessment for Chlorpyrifos in North American Aquatic Environments. Report of an Expert Panel to DowElanco, Indianapolis, IN. ENTRIX, Inc., 202 p.
- (PR-17) Kendall, R.J., L. Best, J. Coats, K. Dixon, J.P. Giesy, M. Hooper, G. Kenega, S. McMurry and K. Solomon. 1998. Terrestrial Ecological Risk Assessment of Chlorpyrifos Use in Corn Agro-ecosystems. Report of an Expert Panel to DowElanco, Indianapolis, IN. ENTRIX, Inc.
- (PR-18) Kendall, R.J., J.P. Giesy, K.R. Solomon, T.B. Hayes, J.W. Simpkins, T.S. Gross, J.A. Carr and E.E. Smith. A Risk-Based Assessment of Endocrine System Responses in Fish, Amphibians and Reptiles to Atrazine. Report of an Expert Panel to Novartis, Inc. Ecorisk, Inc. 149 p.

- (PR-19) Rocky Mountain Arsenal (RMA) Biological Advisory Committee Subcommittee. 2001. Dioxin/Furan Tier I Field Study Results in Wildlife Tissues. 56 p.
- (PR-20) Solomon, K.R., J.A. Carr, J.P. Giesy, T.S. Gross, R.J. Kendall, E.E. Smith, and G. Van Der Kraak. 2002. Endocrine System Responses in Fish, Amphibians, and Reptiles to Atrazine: Assessment of an Expert Panel. 55 p.
- (PR-21) Wu, R., P. Shin, D. Randall, P. Lam, D. Au, P. Ang, B. Morton, J. Gray, J. Giesy, D. Holdway, K. Kloop, J. Chapman, M. Warne, R. Russo and D. Phillips. 2002. Development of a Biological Indicator System for Monitoring Marine Pollution. Hong Kong Environmental Protection Department.
- (PR-22) Giesy, J.P., P.D. Jones, K. Kannan and A.L. Blankenship. 2002. Organochlorine Residues and Their Effects on Fish and Wildlife of the North American Great Lakes. Chapter 3, pp 3-1-3-15 in *The Foundation for Global Action on Persistent Organic Pollutants: A United States Perspective*. U.S. Environmental Protection Agency, Office of Research and Development, Washington D.C., EPA/600/P-01/003F, NCEA-I-1200.
- (PR-23) Jones, P.D., K. Kannan, A.L. Blankenship and J.P. Giesy. 2002. . Accumulation and Effects of Persistent Organic Pollutants in Marine Ecosystems and Wildlife. Chapter 6, pp. 6-1-6-17 in *The Foundation for Global Action on Persistent Organic Pollutants: A United States Perspective*. U.S. Environmental Protection Agency, Office of Research and Development, Washington D.C., EPA/600/P-01/003F, NCEA-I-1200.

FINANCIAL SUPPORT:

Education

Laboratory assistant - Alma College - 1967-1970

National Science Foundation Undergraduate Research Fellow - University of Michigan - 1969

Graduate Research Assistant - Michigan State University (Limnology) - 1970 - 1974

North Central Research Grant, Michigan State Agricultural Station - 1972-1974

Research

U.S. EPA, "Fate of cadmium introduced into artificial stream systems". 1975-1976, \$250,000

U.S. EPA, "Cycling of trace contaminants from coal combustion in aquatic ecosystems". 1976-1977, \$ 240,000

U.S. EPA, "Kinetics of Cadmium and Zinc Accumulation and Elimination by Freshwater Crayfish". 1977-1978, \$ 104,000

NSF-RANN, "Microcosms in Environmental Research". 1978-1979, \$6,000

U.S. EPA, "Microcosms in Environmental Research". 1978-1979, \$5,000

National Environmental Research Park (DOE), "Microcosms in Environmental Research". 1978-1979, \$4,500

Electric Power Research Institute, "Microcosms in Environmental Research". 1978-1979, \$4,500

Institute of Ecology, University of Georgia, "Microcosms in Environmental Research". \$1,500

Environmental Protection Agency, "Fates and Biological Effects of Polycyclic AromaticHydrocarbons in Aquatic Systems". 1978-1981, \$1,130,000

Michigan Agricultural Experiment Station "Evaluation of Phosphoadenylate Concentrations and the Adenylate Energy Charge as a General Integrative Measure of Stress in Fish". 1981-1982, \$65,000

NOAA Sea Grant Program, "Lysosomal Enzyme Release Assay (LERA) as a Measure of Stress in Fish". 1982-1985, \$111,000

U.S. Department of Interior Office of Water Resources Technology, "Metal Speciation in Surface Waters of the Great Lakes Region". 1982, \$24,000

Michigan State University Vice President for Research Atomic Absorption Spectrometry Equipment Grant. 1982, \$52,000

Michigan State Agriculture Experiment Station Toxicology Research Program "Light Induced Toxicity of Polycyclic Aromatic Hydrocarbons". 1982-1985, \$72,950

Michigan State Agricultural Experiment Station Toxicology Research Program "Relationship between Residue Concentrations in Chinook Salmon Eggs and Rearing Temperature on Rearing Mortality". 1982, \$16,119

NOAA-Office of Marine Pollution Assessment "Changes in the Free Amino Acid Pool of Benthic Invertebrates as a Sublethal Toxic Response to Pentachlorophenol." 1983-1984, \$50,464

NIH Biomedical Research Funds "Use of Scanning Electron Microscopy Energy Dispersive X-Ray Analysis and Image Processing as a Rapid Monitor of Lead Concentrations in Freshwater Molluscs". 1983, \$3,560

CIBA-Geigy Corporation, Agricultural Division. "Professional development award for environmental toxicology". 1984, \$25,000

U.S. Fish and Wildlife Service, Great Lakes Fisheries Laboratory. "Effects of Environmental Stress on the Early Life Stages of Lake Trout". 1984, \$12,657

Mideast Peace Fellowship Program for Egypt. "Potential for Decreased Fish Production in the Nile River System due to the Insecticide Dursban". 1984-1985, \$30,900

NOAA Sea Grant Program. "Phototoxicity of Polycyclic Aromatic Hydrocarbons to Lake Michigan Plankton". 1985-1986, \$54,000

U.S. Department of Interior Cooperative State Water Sources Research Program MSU Center for Environmental Toxicology. "Chronic Toxicity of TCDD and TCDF to Rainbow Trout: Effects on Viability of Eggs and Survivorship of Fry". 1985, \$24,500

U.S. EPA, "Toxicity of In-Place Pollutants on Benthic Invertebrates". 1985-1987, \$258,000

Michigan Agricultural Experiment Station "Effects of 2,3,7,8 Dibenzo-p-dioxin on Reproduction of Rainbow Trout". 1985-1986, \$47,000

U.S. EPA, "Equipment-Mass Spectrometer". 1986, \$98,000

Egyptian Cultural and Educational Bureau "Effects of Insecticides on Nile River Fishes". 1985-1986, \$5,000

U.S. Department of Agriculture "Effects of Vitamin A on Responses of Rainbow Trout to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)". 1986-1987, \$28,000

Michigan Sea Grant College Program "Effects of Maternal Exposure of Rainbow Trout to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) on Reproduction". 1987-1988, \$149,800
Michigan State University Center for Environmental Toxicology "Synthesis of 3H-labelled 2,3,7,8-TCDD". 1986, \$4,000

Michigan Toxic Substance Control Commission "Determination of 2,3,7,8-TCDD Equivalents in Environmental Samples". 1987-1988, \$54,000

U.S. Fish and Wildlife Service; "Use of rat hepatoma H-4-II-E cells as a screen for complex mixtures of polychlorinated hydrocarbons in environmental samples". 1987-1989, \$64,000

U.S. Army Corps of Engineers "Toxicity of Sediments and Water in Toledo, Ohio and Buffalo, New York Harbors". 1987, \$54,000

Michigan State University Center for Environmental Toxicology "Effects of Planar, Chlorinated Hydrocarbons on Salmonid Reproduction of Great Lakes Fishes". 1987, \$6,000

Michigan Sea Grant College Program "PCB Residues in Lake Michigan Chinook Salmon Collected From the Ludington Area: Variation Due to Size and Season". 1988, \$4,995

Ludington Michigan Area Charter Boat Association "PCB Residues in Lake Michigan Chinook Salmon Collected from the Ludington Area: Variations due to Size and Season". 1988, \$10,000

Michigan State University-All University Competitive Research Funds."Development of flow cytometry methodologies for use in short-term algal toxicity tests". 1988, \$3,500

Pesticide Research Enhancement Program, MSU. "PCB concentrations in Great Lakes fishes- Human hazards". 1988-1989, \$58,000

U.S. EPA "Toxicity of sediments in Green Bay, WI". 1988-1989, \$40,875

"Verband der Chemische Industrie Deutschland". Development of Quantitative Structure Activity Models to Evaluate the Toxicity of Chemicals in Commerce". 1987-1988, \$11,627

U.S. Dept. Ag. Coop. State Res. Serv. Food and Agriculture National Needs Graduate Fellowship Water Sciences "Water Quality Improvement by Agricultural Systems Management". 1989-1992, \$144,000

Michigan Agricultural Experiment Station "Concentrations of Complex Mixtures of Polychlorinated Hydrocarbons in Great Lakes Fish and Their Potential Effects on Humans". 1988-1990, \$57,000

Michigan Agricultural Experiment Station "Equipment Grant". 1988, \$4,000

U.S. Fish and Wildlife Service "Sediment Toxicity of Selected Refuges". 1988-1990 \$18,000

U.S. EPA "Sediment Toxicity Assessment Protocol Development:Field Validation in the Grand Calumet River". 1988-1990, \$223,351

U.S. EPA "Organic Contaminants in Sediments of the Grand Calumet River, Indiana". 1988-1989, \$48,000,

U.S. EPA "Effects of Mixtures of Toxic Chemicals to Colonial, Fish-eating Water Birds of Green Bay Wisconsin". 1989, \$40,000

U.S. Army Corps of Engineers "Effects of Holding Times on Toxicity of Sediments to Invertebrates". 1989, \$36,145

U.S. EPA Exploratory Research Program. "Toxicity of Complex Mixtures of Polychlorinated Hydrocarbons to Great Lakes Salmonid Fishes". 1989-1990, \$250,450

Pesticide Research Center Research Enhancement Program. "Complex Mixtures of Polychlorinated Aromatic Hydrocarbons: In Vitro Bioassay in Fish, Bird and Human Cells in Culture. 1989-1990, \$40,000

U.S. EPA "Assessment and Remediation of Contaminated Sediments".Under Section 118 of the Clean Water Act. 1989, \$14,991

Michigan Audubon Society and McGregor Fund. "Biochemical Determination of Mixtures of Co-planar, Polychlorinated Hydrocarbon in Great Lakes, Fish-eating Colonial Waterbirds". 1989-1990, \$89,135

U.S. Fish and Wildlife Service. "Use of the H-4-II-E rat Hepatoma Cell/Environmental Extract Bioassay for Determination of 2,3,7,8-Tetrachlorodibenzo-p-dioxin equivalents in Environmental Samples". 1989-1990, \$22,500

U.S. EPA. "Toxicity of Sediments of the Trenton Channel, Michigan". 1989, \$10,875

U.S. Forest Service. "Trace Contaminants in and Their Effects on American Bald Eagles in Voyagers National Park". 1989-1990, \$32,000

U.S. Department of Agriculture. "Chlorinated dibenzo-dioxins and dibenzo furans in fillets of chinook salmon". 1989-1990, \$14,000

U.S. EPA Superfund (Roy F. Weston). "Toxicity of Clear Creek Sediments". 1989, \$28,130

U.S. EPA Superfund Roy F. Weston "Sediment Toxicity of the Saint Mary's River, Michigan". 1989, \$28,130

Consumers Power Company. "Effects of Hydroelectric Projects on Eagle Populations in Michigan". 1990, \$414,000

U.S. EPA Superfund. "Bioavailability of Lead to Swine fed Soil Contaminated with Lead Sulfide". 1990, \$127,089

Michigan State University-Biotechnology Research Excellence Fund. "Development of Novel Cell Lines for Screening of Environmental Toxicants: *In vitro* Bioassay for Complex Mixtures of Polyhalogenated Aromatic Compounds". 1990, \$29,960
Miller Brewing Company. "Contaminants in Eagle Blood". 1990, \$3,000

Consumers Power Company. "Contaminants in Eagle Blood". 1990, \$29,000

USDA-Forest Service. "Satellite Telemetry of Adult Bald Eagles". 1990, \$35,000

US Army, Aberdeen Proving Grounds. "Satellite Telemetry of Adult Bald Eagles". 1990, \$75,000

Earthwatch Foundation. "Bald Eagle Population of Michigan". 1990, \$57,600

Michigan Dept. Military Affairs. "Bald Eagle Population of Michigan". 1990, \$18,000

Michigan Dept. Natural Resources Nongame Wildlife Program. "Contaminants in Eagle Blood". 1990, \$1,850

Minnesota Pollution Control Agency. "Contaminants in Eagle Blood". 1990, \$2,000

U.S. Fish and Wildlife Service. "Development of an Automated Carbon Chromatography System for the pre-analysis Separation of Non-ortho-substituted PCB Congeners". 1990, \$48,000

U.S. Fish and Wildlife Service. "Relationships Between Toxic Chemicals in Double-Crested Cormorant Eggs and Birth Defects". 1990-1991, \$54,000

U.S. EPA-ERL Duluth. "Method for Sediment Toxicity Assessment". 1990-1991, \$70,000

U.S. EPA Great Lakes National Program Office. "A Study of the Lower Saginaw River and Adjoining Saginaw Bay: a PCBs and Trace Metals". 1990-1991, \$125,207

Michigan Great Lakes Protection Fund. "Methods for the Rapid, Sensitive, Inexpensive Screening of Environmental Samples for Planar, Halogenated Hydrocarbons". 1990-1991, \$115,128

Inland Steel Co. "Assessment of the Toxicity of Sediments in Indiana Harbor". 1990, \$45,000

General Electric Co. "Effects of Microbial Reductive Dechlorination of PCBs on Their Toxicity". 1991, \$202,275

U.S. EPA. "Systemic Availability of Lead to Young Swine from the Chronic Administration of Lead-Contaminated Substrates". 1991, \$91,431

Michigan Department of Natural Resources. "Toxicity of Great Lakes Fish to River Otter (*Lutra canadensis*)". 1991, \$72,885

Earthwatch Foundation. "Bald Eagle Population of Michigan". 1991, \$72,000

U.S. EPA, "Transfer of Selected Halogenated Organic Compounds from the Sediments of the Lower Saginaw River and Saginaw Bay to Fish and Fish Eating Water Birds". 1991-1992, \$160,000

Great Lakes Protection Fund. "Assessment of Genetic Diversity of and Contaminants in Bald Eagles of the Great Lakes Region". 1992, \$200,000

USDA. "Development of Novel Recombinant Human Cell Lines for Detection of Low Levels of Toxic Polyhalogenated Aromatic Compounds". 1991-1992, \$20,000

U.S. Department of Agriculture. Food and Agricultural Sciences National Needs Graduate Fellowships Program. "Water Science Fellowship Training Program". 1990-1993, \$192,000

U.S. Fish and Wildlife Service. "Effects of PCBs and Related Compounds in the Chicken as an Avian Model". 1991-92, 47,000

U.S. National Institutes of Environmental Health Safety. "Development of a Novel Cell Line for the Assessment of the Effects of Planar Chlorinated Hydrocarbons". 1991-1994, \$822,802

U.S. Forest Service Challenge Grant. "Bald Eagle Population Biology and Contaminants in Chippewa, Superior and Hiawatha National Forests". 1991, \$34,000

University of Wisconsin. "Concentrations of Contaminants in Birds". 1991-1992, \$60,000

U.S. Department of Agriculture "Contaminants in Bald Eagles and Eagle Population and Habitat Analysis". 1991, \$39,000

Michigan Food & Crop Bioprocessing Center Research Excellence Fund "Development and Utilization of Recombinant Cell Bioassay Systems for the Detection of Toxic Halogenated Aromatic Hydrocarbons". 1991-92, \$25,000

U.S. EPA ERL-Duluth. "Assessment of Effects of Planar Hydrocarbons in Birds of Saginaw Bay, Michigan". 1991-1992, \$70,000

U.S. EPA ERL-Duluth. "Sediment Quality Criteria". 1992, \$10,000

Consumers Power Co. "Assessment of Michigan Bald Eagle Populations". 1992, \$329,106

U.S. EPA. "A Pilot Study for Contaminant Uptake in Two Species of Albatross in the North Pacific Ocean". 1992, \$84,530

World Wildlife Fund. "Contaminants in Animals of the North Pacific". 1992, \$24,000

U.S. FWS. "Contaminants in Great Lakes Birds". 1992, \$37,000

U.S. DI. "Assessment of Productivity and Contaminant Exposure on Nesting Bald Eagles in Michigan". 1992, \$15,000

Michigan Great Lakes Protection Fund. "Analysis Methods and Biochemical Mechanisms of Chlorinated Aromatic Compounds in Biota of the Great Lakes". 1992-1993, \$144,904

Great Lakes Protection Fund. "Assessment of Genetic Diversity of Bald Eagles in Michigan". 1993, \$143,000

MSU Pesticide Research Center, Research Enhancement funds. "Fractionation and Evaluation Techniques for Ah-r-active compounds in the Environment". 1992-1993, \$17,700

U.S. Fish & Wildlife Service. "Use of the H4IIE Rat Hepatoma Cell/Environmental Extract Bioassay for determination of 2,3,7,8-tetrachlorodibenzo-p-dioxin equivalents in Environmental samples." 1992-1993, \$37,950

SERE Group. "Contaminants in Fish and Birds of the Great Lakes Region". 1993. \$20,774

US-EPA. "Methods of Fractionation and Identification of Planar Halogenated Hydrocarbons in Birds from Saginaw Bay, Michigan. 1992-1993, \$50,000

U.S. EPA. "Contaminant Uptake in Two Species of Albatross in the North Pacific Ocean". 1992-1994, \$753,483

USDA. "Development and Application of a Novel Bioassay System for Detection of Estrogen-like Compounds in Foods and Feedstuffs". 1993, \$20,000

US EPA. "Co-planar compounds in the tissues of birds from Saginaw Bay, Michigan". 1993-1994, \$70,000

Upjohn Co., Kalamazoo, MI. "Use of birds and Semi-Permeable Passive Samplers for monitoring". 1993, \$125,000

Upjohn Co., Kalamazoo, Mi. "Equipment Grant" Gas Chromatograph. 1993, \$36,000

Michigan State University Vice President for Research. "Co-planar compounds in the tissues of birds from Saginaw Bay, Michigan". 1993-1994, \$9,000

U.S. Fish and Wildlife Service. "Contaminants in Eagle Blood". 1993-1994, \$9,000

U.S. Fish & Wildlife Service. "Birth Defects in Eagle from the Great Lakes Region". 1993-1994, \$27,000

Michigan Department of Natural Resources. "Evaluation of Toxicity of Sediments in the Lower Detroit River". 1993-1994, \$50,000

MSU Pesticide Research Center Research Enhancement Award. "Analysis Methods and Biochemical Mechanisms of Action of Chlorinated Aromatic Compounds in Biota of the Great Lakes". 1993-1994, \$15,000

National Food Toxicology Center "Estrogenic Compounds in Fish of The Great Lakes". 1993-1994, \$20,000

National Food Toxicology Center. "An assessment of the Toxicity of Chemical Oxidation Products of Aqueous Contaminants by Monitoring Intercellular Communication in Mammalian Cell Cultures". 1993-1994, \$20,000

NIEHS. "Development of Novel Bioassay/Biomarker Systems for Detection of Estrogen Agonists in Complex Mixtures." 1994-1999, \$894,652

US EPA-Office of Water. "Bioavailability and Effects of Organic and Inorganic Compounds in Water & Sediment Systems". 1994-1999, \$660,000

Chemical Manufacturers Association. Estrogen Agonists in the Environment, Effects on Fish & Wildlife." 1994-1999, \$1,500,000

US-EPA Great Lakes National Program Office. "Determination of sources and Trends of PCBs in the Detroit River, Michigan." 1994-1996, \$96,000

MSU Cancer Institute. "Methods for determining the strength of estrogen agonists in the environment". 1994, \$25,000

Michigan Dept. Natural Resources. "Determination of sources and Trends of PCBs in the Detroit River, Michigan." 1994-1996, \$84,000

Upjohn Co. Kalamazoo, Michigan. "Semi-Permeable Sampling Devices for Monitoring the Aquatic Environment". 1994-1995, \$67,000

Michigan Great Lakes Protection Fund. "Defining Persistent, Bioaccumulative and Toxic Great Lakes and Research Needs". 1995-1997, \$139,050

C.J. Johnson, Co. "In vivo Methods of Screening for Endocrine Compounds in Aquatic Systems". 1996-1997, \$10,000

Dow Corning Corp. "Determination for Potential Effects of Polydimethylsiloxanes (PDMS) on Sediment Function". 1995-1997, \$65,000

Fogerty Institute, NIEHS "Training and Research in Environmental Health: The Balkans". 1996-2001, \$776,308

US EPA Competitive Grants Program, Biology Exploratory Research Panel "Development of a Bioassay for AhR-mediated Toxicity to Rainbow Trout". 1997-1999, \$304,771

Dow Elanco, Inc. "Ecological Risk Assessment for the Organochlorine Insecticide *Chlorpyrifos*". 1996-1997, \$1,000,000

Dow Chemical Company, Inc. "Endocrine Modulators in the Environment". 1997-1999, \$60,000

Southern Nevada Water District. "Monitoring of Estrogenic Substances in Surface and Drinking Water". 1997, \$11,000

Chemical Manufacturers Association. "Estrogen Agonists in the Environment, Effects on Fish & Wildlife." 1998, \$50,000

Southern Nevada Water District. "Monitoring of Estrogenic Substances in Surface and Drinking Water". 1998-1999, \$250,000

Chemical Manufacturers Association, Ethoxylates panel. "Concentrations of Alkylphenol ethoxylates and their Degradation Products in Fish". 1998-1999, \$216,000

Woodward-Clyde. "Determination of Total Dioxin-Like Activity in Kestrel Eggs at the Rocky Mountain Arsenal". 1998, \$179,465

Indo-US Joint Research Program. "A Semi-Automated, Multicomponent Analysis Method for Planar Aromatic Chlorinated Hydrocarbons (PCHs) and Other Compounds in Marine Organisms". 1998-2000, \$225,000

Ciba Specialty Chemicals, "Estrogenicity of Selected Chemicals". 1998, \$13,000

Michigan Department of Environmental Quality. "Agricultural and Industrial Residues in Tissues of Amphibians in Lower Michigan". 1998-1999, \$47,000

Ciba Specialty Chemicals. "Estrogenicity of Process Chemicals". 1998, \$6,000

Raytheon, Inc. "Distribution of PCBs in Sediments of The Sudbury River, Massachusetts 1998, \$47,000

Fox River Consortium. "Ecological Risk Assessment of PCBs in the Fox River, Wisconsin". 1998-1999, \$301,834

Michigan Department of Environmental Quality. "A Strategic Environmental Quality Monitoring Program for Michigan's Surface Waters: Sediments". 1999-2010, \$1,056,800

3M Company. "Perfluorinated Chemicals in the Environment". 1999-2000, \$1,300,000

Michigan Department of Environmental Quality. Surface Water Quality Division. "Temporal Monitoring of Chemical Residues in Michigan Inland Lake Sediments". 1999-2003, \$581,332

Raytheon, Inc. "Distribution of PCBs in Sediments of The Sudbury River, Massachusetts 1999, \$40,000

Great Lakes Protection Fund. "Trophic Level Accumulation of Residues in the Great Lakes". 1999, \$15,000

Kalamazoo River Study Group. "Ecological Risk Assessment of PCB in Sediments of the Kalamazoo River, Michigan". 2000-2003, \$2,119,544

Alkylphenol Ethoxylates Research Council "Concentrations of APEOS and their Degradation Products in Water, Sediments and Fish of Michigan Rivers". 2000, \$25,000

Hercules, Inc. "Assessment of Toxicity of perfluorinated Compounds". 2000, \$75,000

Michigan Great Lakes Protection Fund. "Baseline Characterization of Saginaw Bay Watershed Sediments". 2001, \$77,000

Ecorisk, Inc. "Mechanisms of Action of Atrazine in Adult and Metamorphosing *Xenopus Laevis* And *Rana Clamitans*". 2001-2003, \$769,714

Michigan Department of Environmental Quality. "Dioxins in the Tittabawassee River System". 2002, \$75,000

US EPA. "Use of the H295R Human Adrenocortical Carcinoma Line for Screening for Effects of Compounds on Steroidogenesis". 2002-2004, \$399,998

Dow Chemical Company, Midland, MI. "Ecological Impacts of PCDD/Fs on the Tittabawassee River". 2003, \$326,000

Ciba Specialty Chemicals, Manchester, UK. "Assessment of the Estrogenic Potential of Fluorinated Compounds". 2003, \$15,000

Hong Kong Ministry of Environment. "Application of Biomarkers to Assess Effects of Pollutants in Hong Kong Harbor". 2002-2003, \$104,778

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan. "Survey of Concentrations of Perfluorinated Chemicals in the Marine Coastal Waters of China and Korea". 2003, \$32,000

Brown and Caldwell, Maui, Hawaii. "Analysis of Industrial Chemicals in Waste Waters from Honolulu". 2003, \$19,020

US EPA. "Optimization of an Assay using the H295R Cell Line to Identify Chemical Modulators of Steroidogenesis and Aromatase Activity". 2004-2005, \$602,871

Dow Chemical Co. Field Studies in Support of the Tittabawassee River Ecological Risk Assessment." 2004-2008, \$8,071,939

Hong Kong University Grants Council. "Studies on Endocrine Disruptors and Red Tide Toxins in Coastal Waters of Hong Kong: A Risk Assessment Approach". 2004-2005, \$166,666

Hong Kong University Grants Council. "A Proposal for the Establishment of the Center for Marine Environmental Research and Innovative Technology (MERIT)". 2004-2009, \$9,113,924

US EPA Science to Achieve Results (STAR) Program on Computational Toxicology and Biology in Hazard Identification and Risk Assessment. "Chemical Induced Changes in Gene Expression Patterns (GEPs) using a Small Fish Model: A Systems Approach". 2004-2007, \$750,000

Hong Kong University Research Grants Council. "Fates and Effects of PFCs and PBDEs in the environment. 2005-2006. \$130,485.

TOTAL RESEARCH GRANTS

\$45,564,800

CONSULTANTSHIPS:

- * **Aiken, Gump, Strauss, Hauer and Feld, Attorneys:** Washington, D.C.
 - (1) Trichloroethylene contamination of ground and surface water, Sundstrand Co., Dowagiac, Michigan. Primary expert witness, modeling, water quality criteria, permitting regulations and environmental effects of TCE and similar compounds. 1987.

- * **ABC Laboratories, Inc.:** Columbia, MO.
 - (1) Assessment of market opportunities.

- * **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

- * **American Home Assurance Co.** (See Thorsrud, Cane and Paulich).

- * **American International Adjustment Co. (AIAC)**
 - (1) Pollution exclusion case involving the Cliffs-Dow site in Marquette, Michigan. 1994-Present

- * **Badon and Ranier, Attorneys at Law,** Lake Charles, Louisiana
 - (1) Litigation on contaminated sediments near oil drilling platforms

- * **Bagget, McCall and Burgess, Attorneys at Law**, Lake Charles, Louisiana
 - (1) Litigation, hexachlorobenzene and hexachlorobutadiene in fish, Joint action suit, 1994-1995
- * **Balsam Environmental Consultants, Inc:** Salem, NH.
 - (1) Review of and modeling of PCBs in sediments of the New Bedford Harbor. 1986-1987, 1990.
- * **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.
- * **Bliss-Riordan Attorneys at Law**, Seattle WA
 - (1) Litigation involving toxicity of metals from slag in water and sediment of Commencement Bay and Puget Sound. 1993-1994
- * **Bosh, Inc.** St. Joseph's MI, 2001
 - (1) Groundwater contamination with TCD and degradation products. Advised on sampling and analysis plan and represented clients in negotiations with state agencies.
- * **Brown and Caldwell, Inc.** Maui, Hawaii
 - (1) Analysis of Industrial Chemicals in Waste Waters from Honolulu"
- * **Cadwell Corporation:** Harper Woods, MI.
 - (1) Toxicity testing of and assistance in permitting with Michigan Department of Natural Resources for a chemical used in treating wastewater, May, 1989.
- * **Campbell and Graves, Attorneys at Law:** Houston, Texas
 - (1) Consultant on a number of cases involving ecological hazard assessment and liability management

- * **Camp, Dresser and McKee:** Detroit, Michigan
 - (1) Natural resource damage assessment for effects of PCBs and dioxins in Saginaw Bay, Michigan
- * **Canada Research Chairs program:** Ottawa, Canada
 - (1) External reviewer of chair application to University of Guelph
 - (2) External reviewer of chair application to University of Waterloo
- * **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 Chlorene Institute onchlorinated 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.
- * **CBS Corp.:** Pittsburgh, Pennsylvania
 - (1) Ecological Risk Assessment of PCBs emanating from groundwater springs to Clear Creek, Bloomington, Indiana.
 - (2) Develop trophic level (food chain) model of accumulation of PCBs by fish in Clear Creek, Indiana.
- * **Chemical Land Holdings, Inc. (CLH, Inc.):** Kearney, New Jersey
 - (1) Ecological Risk Assessment of sediment-bound contaminants in the Passaic River, New Jersey. 1998-
 - (2) Determination of relative contributions of residues from combined sewer overflows to the sediments of the Passaic River, New Jersey. 1998-

- * **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*.

- * **ChemRisk Corp:** Portland, MA. 1991.
 - (1) Design of Sediment Sampling Plans and Chemical Analyses.
 - (2) Sediment quality criteria sampling design and data analysis.

- * **Chevron Oil Co.:** Richmond, California
 - (1) Ecological risk assessment of petroleum hydrocarbon and metal contamination of the joint operating canal at the Port Arthur, Texas oil refinery site.

- * **Chlorine Chemistry Council:** Washington, D.C., 2001
 - (1) Review of Research foundation for Health and Environmental Effects Science Research Plan for Fy 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

- * **CIBA,** Greensboro, NC. 1994
 - (1) Scientific Panel to Assess Ecological Risk of herbicide Atrazine. 1994

- * **CIBA Specialty Chemicals, Inc.,** 2000
 - (1) Ecological Risk Assessment of DDT residues at the McIntosh Alabama site.

- * **City of Columbus, Ohio Water Works:** 1979.
 - (1) 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
- * **Chemical Land Holdings, Inc.:** Kearnie, NJ, 1999-2000
 - (1) Ecological Risk assessment of residues in sediments of the Passaic River, NJ
 - (2) Toxicant Identification and Evaluation of Sediments of the Passaic River, NJ
- * **Conoco Inc.** 2000
 - (1) Toxicant Identification and Evaluation (TIE) of sediments of the Calcasieu Estuary at Lake Charles, LA
- * **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.
- * **Cozen & O'Connor, Attorney's:** Seattle, WA, 1994
 - (1) Assessment of ecological damages of a charcoal and creosote plant. The Cleveland-Dow (Owned by Georgia Pacific) site in Marquette, Michigan
- * **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
- * **Dow Chemical Co.** Midland, Michigan
 - (1) Risk Assessment of PCDD/DFs in the Tittabawassee River, Michigan, 2002-2004.

- (2) Expert witness for litigation on concentrations of Dioxins in the blood of Korean veterans of the Vietnam War, 2002-2004.
- (3) Development and application of methods to determine the bioavailability of PCDD/DFs in soils of Midland Michigan, 2002-2004.

* **Cytec, Inc.:** Wallingford, Connecticut

- (1) Development of ambient water quality criteria and ecological Risk Assessment of Formaldehydhe in the Quinnipiac River near Wallingford, Connecticut.

* **Dow-Elanco, Corp.** Indianapolis, Indiana

- (1) Testimony on A"Ecological Risk Assessment for the Corn Cluster Pesticides". TO US EPA Science Advisory Board. 1996
- (2) Ecological Risk Assessment of Chlorpyrifos in the Midwestern US Agroregion. 1996-1998

* **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

* **Elken-Metals Co:**

- (1) Litigation, natural resource dmmage relative to potential effects of Elken-Metals Co. effluents to fish and mussels in the Ohio River. United States of America, State of West Virginia and State of Ohio, vs Elkem-Metals Co. Civil case 2:3-CV-528.

- * **ENTRIX, Inc.**, Houston, TX:
 - (1) Senior Consultant, 1995-Present
- * **Environment Agency of England and Whales:** 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.

Falcon Waterfree Technologies, Los Angeles, CA:

 - (1) Ecological Risk Assessment of Waterfree urinal systems and development of alternative sealants. 2003-2004

- * **Florida Department of Environmental Protection:** Tallahassee, Florida.
 - (1) Task Force on Water Pollution Control. Metals in fish effects on fish, mercury and cadmium. 1983.
- * **Fox River Consortium:** Green Bay, Wisconsin
 - (1) Review of ecological risk assessment for PCBs in the Lower Fox River, WS. 1996
 - (2) Development of restoration plans for the Lower Fox River, WS. 1996-1997.
 - (3) Ecological Risk Assessment of PCBs in the Sediments of the Lower Fox, River, Wisconsin and Green Bay.
- * **Gardner, Carton and Douglas:** Chicago, IL.
 - (1) Expert witness PCB contamination and suspended solids loading to Waukegan, Wisconsin Harbor. For Outboard Marine Corp. 1989-1990.
- * **General Electric Corp.** Plainwell, Connecticut
 - (1) Consultant on PCB contamination of the Hudson and Housatonic Rivers, 1997-1998.
- * **Genesco, Inc.** White Lake, MI, 1999-2000
 - (1) Risk assessment of chromium in sediments of White Lake, MI.
 - (2) Litigation support for suite involving sediment contamination
 - (3) Field studies of the cause of toxicity of sediments in White Lake, MI
 - (4) Toxicity Identification and Evaluation of Sediments of White Lake, MI
- * **Georgia Pacific Corp.:** Washington, D.C.
 - (1) Litigation dioxins in fish human health assessment, 1991.
- * **P. H. Glatfelder Co:** Spring Grove, PA
 - (1) Risk Assessment and Review of USFWS report on Dioxins in Codorous Creek, PA. 1999
- * **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
- * **Herchel Hobson, Attorney at Law, Beaumont, TX**
 - (1) Litigation, Hexachlorobenzene and Hexachlorobutadiene in Fish, Class action suit, 1994- 1996
- * **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.
- * **Home Insurance Company: See Tressler et al.**
- * **Homestake Mining Company: San Francisco, California**
 - (1) Member of Blue Ribbon Panel to assess adequacy of the remediation of Whitewood Creek, South Dakota CERCLA site. Arsenic contamination from mine tailings
 - (2) Ecological risk assessments of metals (As, Hg, Cu, Zn, Pb) in the Whitewood Creek, Belle Fouché and Cheyane Rivers and Owahe Reservoir, South Dakota
- Hong Kong Baptist University: Hong Kong, China**
 - (1) External examiner for Degree of Doctor of Philosophy, 2004
- * **Hong Kong Research Grants Council: Hong Kong, China**
 - (1) Grant Proposal review, 2001
- * **Honigman, Miller, Schwartz and Cohn, Attorneys: Detroit, MI, with Wendt Consulting, Inc., Alma, MI.**
 - (1) Review of PCB Contamination at Hitachi Industrial Site, Edmore, MI. 1987.
- * **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) Externam reviewer for promotion and tenure, 1997
- * **Inland Steel Corp:** E. Chicago, IN.
 - (1) Development of sediment toxicity monitoring program.
- * **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) Rxternal reviewer of grants for the EMBARK Initiative, 2004

- * **Italian Institute of Hydrobiology, Italian National Research Council:** Pallanza, Italy.
 - (1) Sediment toxicity and metal speciation in Lake Orta, which is acidified and contaminated with copper and ammonia.
- * **Jones, Day, Reavis and Pogue, Attorneys at Law,** Washington, D.C.: 1992-Present.
 - (1) Litigation, dioxins in fish from a pulp and paper mill. Wildlife hazard assessment, Bioavailability, cancer risk.
- * **Jones Day, Attorney's at Law,** Cleveland, Ohio: 2005
 - (1) Litigation, natural resource damage relative to potential effects of Elken-Metals Co. effluents to fish and mussels in the Ohio River. United States of America, State of West Virginia and State of Ohio, vs Elkem-Metals Co. Civil case 2:3-CV-528.
- * **Jones, Jones & Alexander,** Cameron, Louisiana
 - (1) Litigation, hexachlorobenzene and hexachlorobutadiene in fishes, Class action suit, 1994-1996
- * **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 and Spaulding:** Washington, D.C. 1991-1992.
 - (1) Litigation, dioxins in fish from a pulp and paper mill. Cancer risk. Bioavailability.
- * **King Faisal University:** Dammam, Saudi Arabia
 - (1) External advisor and program reviewer, 1992-Present.
- * **Latham & Watkins, Attorneys at law:** San Diego, CA., 1993-Present
 - (1) DDT contamination litigation: Sediment contamination, effects on benthic invertebrates, fish birds: Ecological risk assessment

- * **Laxault & Nomura, Ltd., Attorneys at Law, Reno, NV**
 - (1) Expert Witness: Effects of Petroleum Hydrocarbons in Lake Tahoe, NV, 1997
- * **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 Wasteload 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 Engergy 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.
- * **Miles Corp.-Agricultural Chemical Division:**
 - (1) Review of registration materials for new pesticide. 1992.
- * **Minnesota Mining and Manufacturing, Inc.:** Minneapolis, MN.
 - (1) Review of Environmental Programs, 1991.
- * **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
 - (3) Expert witness for litigation on concentrations of Dioxins in the blood of Korean veterans of the Vietnam War, 2002-2003.
- * **Montana Power Company:**
 - (1) Metal contamination in the Clark-Fork River System. Lead, cadmium, zinc and arsenic from mine wastes. Monitoring program design. 1985.
- * **Montrose Chemical Co.:** Los Angeles, California, 1991-Present
 - (1) Los Angeles Harbor, CA, Litigation. Natural resource damage assessment of DDT.
 - (2) Richmond Harbor, CA, Litigation. Natural resource damage assessment of DDT.
- * **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):**, Kamazoo, 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 Programing on Environmental Issues, 1994
- * **Novartis, Inc.**
 - (1) Member of Expert panel to conduct an ecological risk assessment of atrazine as an Endcrine Disruptor, 1997
- * **Nutter, McClennen and Fish, Attorneys: Boston, Massachusetts.**
 - (1) Expert witness, PCB contamination of New Bedford Harbor. With AVX Corporation and Balsam Environmental Consultants. 1986, 1990.
- * **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
- * **O'Brien and Gere: Syracuse, NY.**
 - (1) Remediation study of chloride contamination in Onondaga Lake, New York. 1990.
- * **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.
- * **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
- * **Parcel & Mauro: Denver, CO, 1994**

- (1) Expert witness metal toxicity in sediments and toxic effects of metals to fish. Clark fork river, Montana.
- * **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
- * **Paul-Hastings-Janofsky and Walker Attorneys:** Stanford, CT.
 - (1) Arsenic poisoning case. 1985.
- * **Pharmacia & Upjohn, Inc.** Kalamazoo, Michigan (see Upjohn, Co.)
 - (1) Litigation Support and Expert witness on PCBs in the Kalamazoo River, 1997.
- * **Phelps-Dunbar, Attorneys at Law, New Orleans**
 - (1) Ecological risk assessments, litigation support, expert testimony for chemicals spilled during a train derailment at Eunice, LA (see Union Pacific Rail Road). Class action suit, 2001-2002.
- * **Pierce Atwood, Attorneys at Law:** Portland, MA, 2000
 - (1) Ecological risk assessment of polychlorinated dioxins in fishes of rivers in the vicinities of paper mills of Maine.
- * **Pillsbury, Madison, and Sutro, Attorneys at Law:** Los Angeles, CA
 - (1) Expert witness, case development and document review - PCB's, DDT in sediments, sediment quality criteria
- * **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.
- * **Raytheon Corp.:** Wayland, Massachusetts
 - (1) Ecological Risk Assessment of PCBs in sediments of the Sudbury River, Wayland, Massachusetts
- * **R.C.G. Haggler Baille:** Boulder Colorado

- (1) Natural resource damage assessment, of Dioxins and PCBs in Saginaw Bay, Michigan
- * **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.
- * **Reminger and Reminger, Attorneys at Law:** Cleveland, OH. 1983.
 - (1) Trace metal contamination of soil, Expert Witness, litigation.
- * **Residuals Management Inc.,** Madison, Wisconsin: 1982-1984.
 - (1) Fate of PCBs in Shiawassee River due to cleanup operations.
- * **Rhoades, McKee and Boer, Attorneys:** Grand Rapids, Michigan.
 - (1) For Farmers Home Insurance. Groundwater contamination from solid waste landfill. 1984-1987.
 - (2) Soil and groundwater contamination from leaking underground storage tank. 1986-1987.
- * **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.
- * **Roberts, Betz and Bloss Attorneys at Law:** Grand Rapids, Michigan, 1987-Present.
 - (1) Groundwater contamination from municipal, solid waste landfill. Expert witness Litigation preparation Deposition. 1987-Present.
- * **Ropes and Gray, Attorneys at Law:** Boston, MA, 1989-Present.
 - (1) Natural Resource Damages due to DDT and PCB Contamination of Los Angeles Harbor.

- * **Saginaw National Watershed Initiative, 1994-Present.**
 - (1) Technical Steering Committee
- * **Schreck-Morris, Attorneys at Law, Reno, NV**
 - (1) Expert Witness: Effects of Petroleum Hydrocarbons in Lake Tahoe, NV, 1997
- * **SETAC Foundation for Environmental Education: Pensacola, Florida**
 - (1) Chairman, Board of Directors, 1992-1993.
- * **Shell Chemical Co.: Houston, Texas**
 - (1) Consultant for ecological risk assessment of polychlorinateddibenzo-p-dioxins and polychlorinateddibenzo furans at the Rocky Mountain Arsenal site. 1997-1998
- Silicones Environmental Health & Safety Council**
 - (1) Science Advisory Group (SAG) for silicones in the environment, 1994
- * **Solutia, Inc. (See Monsanto)**
- * **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.
- State of New York, Department of Health**
 - (1) External examiner, promotion and tenure, 2004
- * **Syngenta, Inc., Grensboro, NC**
 - (1) Ecological Risk Assessment for the endocrine effects of Atrazine to frogs.
- * **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
- * **Swiss Federal Institute for Environmental Science (EAWAG), Dubdorf, Switzerland, 2003**
- (1) Project Fishnet. Advisor to the task force investigating possible causes of declines in fish stocks in Swiss Rivers.
- Swiss National Research Programe:**
- (1) Reviewer, Research Proposals, Endocrine Disruptors Programme
- * **Texas Learning Technology Group**
- (1) Technical advisor for development of a multi-media program entitled AEcoExpert: 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"
- * **Thorsrud, Cane & Paulich**, Seattle Washington. 1993.
- (1) Expert Witness: ASARCO, Inc. vs. American Home Assurance Co. Metal Contamination-Environmental Insurance case.
- * **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

- (1) 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.
- * **Tolley, Fisher and Verwys, Attorney's at Law:** Grand Rapids, MI.
 - (1) Litigation on fish kill by insecticide Endosulfan.
- * **Tressler, Soderstrom, Maloney and Priess Attorneys at Law:** Chicago, IL.
 - (1) Litigation on PCB, BOD and total dissolved solids in Kalamazoo River, Michigan, 1993. for Kemper and Home Insurance Companies.
- * **Union Pacific Rail Road, Houston, TX**
 - (1) Ecological risk assessments, litigation support, expert testimony for chemicals spilled during a train derailment at Eunice, LA (see Phelps Dunbar Attorneys at Law). Class action suit, 2001-2002.
- * **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 Toronto:**
 - (1) External reviewer for promotion and tenure, 2004
- * **University of Wyoming:** Laramie, Wyoming
 - (1) External promotion and tenure reviewer, 2004
- * **Unocal Co.:** San Francisco, California
 - (1) Defense in litigation of petroleum hydrocarbon contamination of the Guadalupie Oil field.
- * **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 defense in litigation relative to PCB contamination of the Kalamazoo River. Depositions and testifying witness.
- * **URS, Inc:** Buffalo, NY.
 - (1) Water sampling program for volatile organics. 1986.
 - (2) Design and interpretation of ecological and human health assessment of hazardous waste site, (PAS site, Oswego, New York). 1987.
- * **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 Harbor, 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 "ADioxin 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, Kurunthachalam 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.

- (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.

* **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
- * **Viacom, Inc., Pittsburgh, Pennsylvania**
 - (1) Ecological Risk Assessment of BPCs at several sites in Bloomington, IN, 1997-2002
- * **Wageningen Agricultural University:** Wageningen, The Netherlands
 - (1) Program Review for Ecotoxicology, May 1999.

* **Warner Norcross & Judd, Attorneys at Law**

- (1) Litigation Support and Expert witness on PCBs in the Kalamazoo River, 1997-1998.
- (2) Litigation Support and Ecological Risk Assessment of Chromium in Sediments at the White Lake Tannery Site, White Lake, Michigan. 1999-2000.
- (3) Assisted with writing rules for regulation of contaminated groundwater entering surface waters (Groundwater-Surface water interface) under Michigan Part 201 rules sections 716 and 512.

* **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.

* **Watson and Harrison, Attorneys at Law: Tuscaloosa, AL.**

- (1) Evaluation of chloride in effluents from coal methyl productions to the Chaba River, AL. 1990.

* **Westinghouse, Inc.:** (see CBS, Inc.)

* **White Lake Tannery, Inc.:** (see Warner, Norcross and Judd)

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

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

* **Womble and Carlyle, Attorneys at Law: Charlotte, NC**

- (1) Litigations with pulp and paper mills. 1993

* **World Health Organization Advisorships**

- (1) Development of Toxic Equivalency Factors of polychlorinated dibenzo 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.