

**PREFILED DIRECT TESTIMONY OF
DIANE S. HENSHEL, PH.D.**

**SAVE THE VALLEY, INC.
EXHIBIT DSH-1**

Diane S. Henshel

*Indiana University School of Public and Environmental Affairs
1315 E 10th Street
Bloomington, IN 47405
4121 Cadbury Court
Bloomington, IN 47401
dhenshel@gmail.edu
812 345-0944 cell
classwebs.spea.indiana.edu/dhenshel
*www.indiana.edu/~speaweb/faculty/henshel.php**

EDUCATION

PhD Biomedical Sciences – Neuroscience, 1987
 Washington University School of Medicine, St. Louis MO
BSc, BA Biology (BSc) and English (BA), 1978
 Brown University, Providence RI

EMPLOYMENT

1998 – Present Henshel EnviroComm Consulting, Owner and Sole Proprietor
 My consulting company focuses on providing technical support for both government and communities addressing environmental contamination problems. We provide laboratory support as well as risk communication and risk assessment related services.

1992 – Present Indiana University, School of Public and Environmental Affairs
 Associate (1998- Present) and Assistant (1992 – 1998) Professor
 Courses taught: Environmental Toxicology, Risk Assessment, Risk Communication, Master's level Capstone, Controversies in Environmental Health, Endocrine Disruption, Developmental Neurotoxicology, Introduction to Environmental Science
 Research Foci:
 1) Biomarker based research on the effects of pollutants on developing embryos, focus on neuroendocrine, liver, heart and kidney effects, correlating laboratory studies with field studies of environmentally exposed animals.
 2) Characterization and evaluation of a non-invasive treatment that counteracts oxidative and energy stress-related chemical toxicity.
 3) Development of landscape scale data mining, analysis and modeling techniques to link indicators of environmental exposure with population scale indicators of related health impacts.
 4) *Teaching related Research: Development of methodologies to implement and evaluate multi-class, multi-disciplinary service learning components into classroom teaching.*

SELECTED RECENT ACHIEVEMENTS, SERVICE ACTIVITY

US-Canada International Joint Commission Science Advisory Board and Workgroup on Ecosystem Health (1997 – 2001)
National Research Council Committee on Assessment of Risks from Remediation of PCB-Contaminated Sediment (1999 - 2001)
National Oceanic and Atmospheric Administration (NOAA) Northwest Research Science Center, *Facility Review Team* (2005)
Environmental Protection Agency Expert Panels (< 10 years)
 Ecological Risk Assessment State of the Practice Review Workshop 2006
 Food Quality Protection Act (FQPA) Science Advisory Panel (SAP) (1998 -)

EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Endocrine Disruptors Screening & Testing Advisory Comm. (EDSTAC) Report Review Panel (1998 - 1999).

Service awards: Society for Environmental Toxicology and Chemistry (SETAC)
Presidential Citation (2006)
American Society for Testing and Materials Committee E47 on Biological Effects and Environmental Fate: Outstanding Service Award (2003),
Exceptional Service Award (1996)
Indiana University: Scholarship of Teaching and Learning Leadership Award (2006), Faculty Research Support Program Awardee (2006), SPEA Teaching Award (2005), Summer Faculty Fellowships (1993, 1996, 2005), Outstanding Junior Faculty Award (1997)
Editorial Boards: Environmental Bioindicators; Environmental Communication: A journal of nature and culture

Publications: 43 Peer reviewed articles, 2 books edited, 3 editor reviewed & book chapters, 103 abstracts of international/national/regional meeting presentations
Mentored: 1 post-doctoral fellow, 8 PhD students (2 completed PhD, 2 in process), 29 master's level research students (3 wrote a master's thesis, 2 more in process), 37 undergraduates, 8 high school students

SKILLS and other EXPERTISE

Environmental Justice, Social Equity, and Sustainability issues
Trained Mediator and Facilitator
Risk and Technical Communication, teacher and practitioner
SWOT //GOS organizational analysis and planning
Workshop and Symposium planning and logistical coordination
Photographer
Computer Programs: Microsoft Office Suite Professional, WordPerfect Office Suite, SAS and other statistical packages, SigmaPlot, Adobe Photoshop, ArcView, ImagePro Plus

ORGANIZATIONS (*with highest office*)

American Association for the Advancement of Science (AAAS), American Society for Testing and Materials (ASTM) Committee E47 on Biological Effects and Environmental Fate (*Vice Chair*), Association for Women in Science (AWIS; *President, Bloomington Chapter*), International Association for Great Lakes Research (IAGLR; *Life member*), International Society for Environmental Bioindicators (*editorial board*), Society of Toxicology (SOT), Society for Environmental Toxicology and Chemistry (SETAC; *President, Ohio Valley Regional Chapter*), Society for Neuroscience (SfN), Sigma Xi Scientific Honors Society (*Life member*), IUB-wide Environmental Literacy and Sustainability Initiative (*steering committee*), IUB-SOTL Leadership Advisory Team, IUB-Sustainability Task Force -Workgroups on Education and Outreach, and the Indoor Built Environment.

Diane S. Henshel

*Associate, Professor, Indiana University
School of Public and Environmental Affairs
1315 E 10th #340
Bloomington, IN 47405
dhenshel@indiana.edu
812 855-4556 P 812 855-7802 F
classwebs.spea.indiana.edu/dhenshel*

EDUCATION

Undergraduate

BS (Biology) 1978

BA (English) 1978

Brown University, Providence R.I.

Graduate

PhD (Neuroscience) 1987

Washington University, Biology and Medical Sciences Program, St. Louis, MO

Dissertation: Electrogenic responses of dissociated Muller (glial) cells from neonatal tiger salamander retina.

Post-doctoral

Washington University Medical School, Department of Anatomy, St. Louis, MO

Research Associate (Dr. Steven Rothman, supervisor), 5/87 - 12/87

University of British Columbia, Departments of Animal Science and Zoology,
Vancouver, British Columbia, Canada

Post-Doctoral Fellow (Drs. Kim Cheng and John Steeves, supervisors), 9/88 - 12/89

University of British Columbia, Department of Zoology, Vancouver, British Columbia, Canada
Research Associate (Dr. John Steeves, supervisor), 1/90 - 7/92

ACADEMIC APPOINTMENTS

Indiana University, School of Public and Environmental Affairs (SPEA), Bloomington, IN

Associate Professor of Public and Environmental Affairs, 1998 - Present

Assistant Professor of Public and Environmental Affairs, 1992 - 1998

**OTHER APPOINTMENTS AND PROFESSIONAL CONSULTANTSHIPS
(POST-GRADUATE)**

Sole Proprietor, Henshel EnviroComm, Bloomington, IN (1999 - Present)

University of British Columbia, Department of Zoology, Vancouver, British Columbia, Canada

Sessional Lecturer: Animal Physiology, 9/89 - 12/89

LICENSURE AND CERTIFICATION

Mediation Training:

Environmental Mediation (40 hour training)
Basic Mediation Skills (40 hour training)
Public Policy Mediation (40 hour training)
Community Conflict Resolution (40 hour training)
Victim Offender Conferencing (32 hour training)
Large Group Facilitation (9 hour training)

24 Hour HAZWOPER Certification (1993 - 1994, not updated)

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science

American Society for Testing and Materials (Committee E-47 on Biological Effects and Environmental Fate) *First Vice-Chair* (1/98 - 12/03)

Chair: Subcommittee 47.09 Biomarkers (1992 - 1998); 47.92 Symposium Planning

Active Member: Subcommittees .02 Terminology, .04 Wildlife Toxicology,
.12 Behavioral Toxicology, .13 Risk Assessment, .14 Risk Management, .90
Executive

Association for Women in Science, Bloomington, IN chapter

President (1994 - 1995, 1996 - 1998), *President-Elect* (1993 - 1994)

Past-President and Chair, Program Committee (1995 - 1996, 1998 - 1999)

Secretary (1999 - 2006)

International Association for Great Lakes Research, *Life member*

National Association of Environmental Professionals (NAEP)

NAEP Indiana Chapter *Steering Committee* and *Vice-President* (1996 - 1998)

New York Academy of Science

Sigma Xi, the scientific research honors society, *Life member*

Society for Environmental Toxicology and Chemistry (SETAC);

Ohio Valley SETAC (1993- Present); Pacific Northwest SETAC (1990-1994)

Board Member, Ohio Valley SETAC (1995 - 2001; 2003 - 2005)

President, OVSETAC (1999-2000), *President-Elect*, OVSETAC (1998-1999),

Past-President, OVSETAC (2000-2001);
National: Education Committee (2002 - Present);
Government Affairs Committee (1999 - 2001)
Program Committee (2006-2007)

Society for Neuroscience

Society of Toxicology

Pacific Northwest Association for Toxicology (1990-1993)

Specialty Sections: Developmental and Reproductive Toxicology, Neurotoxicology

Indiana University Graduate Faculty; *Full Member*

HONORS and AWARDS

Indiana University Scholarship of Teaching and Learning Leadership Award, 2006

Society of Environmental Toxicology and Chemistry: Presidential Citation, 2006

Indiana University School of Public and Environmental Affairs Teaching Award, 2005

Indiana University Summer Faculty Fellowship, 1993, 1996, 2005

American Society for Testing and Materials Committee E47:

Outstanding Service Award of Appreciation, 2003

Exceptional Service Award, 1996

Indiana University Outstanding Junior Professor Award 1997

Listed in **Who's Who in the World** 1995 -

Listed in **Who's Who in American Women** 1995 -

Listed in **Who's Who in American Education** 1994 -

Listed in **Who's Who in the Midwest** 1994 -

Listed in **Who's Who in Science and Engineering** 1992 -

Listed in **Who's Who in Medicine and Healthcare** 1997 -

Listed in **Who's Who in the West** 23rd, 24th Edition, 1992/1995

New York State Regents Scholarship, 1973

National Merit Scholarship - Letter of Commendation, 1973

GRANTS, CONTRACTS, FELLOWSHIPS and AWARDS (P.I. unless mentioned)

Indiana University Scholarship of Teaching and Learning Fellowship, (awarded to the Environmental Literacy and Sustainability Initiative team, of which I am an equal co-PI and one of the five faculty members participating with my E512/E412 Risk Communication class in the Fall 2006 semester), \$30,000, 2006 – 2008, "Food for Thought"

Indiana University Faculty Research Support Program, 2006 – 2007, \$64,000, "Effect of Red Light Phototherapy on Dioxin-Induced Toxicity in Chick Embryos"

Indiana University Multidisciplinary Ventures and Seminar Fund, 2005 – 2006, \$5,000, "Effect of Near Infra-Red Light on Dioxin Toxicity in Embryos"

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Indiana University Grant-in-Aid of Research, 2004 – 2005, \$2,500, “Effect of Near Infra-Red Light on Dioxin Toxicity in Embryos”

Indiana University Summer Faculty Fellowship, 2005, \$8,000, “Effect of Near Infra-Red Light on Dioxin Toxicity in Embryos”

US Fish and Wildlife Service, 1995 – 2006, \$380,600 through IU, \$175,000 through Henshel EnviroComm

“Technical Assistance on the NRDA Sites in Monroe and Lawrence Counties, IN - Histology”

“Technical Assistance on the NRDA Sites in Monroe and Lawrence Counties, IN”

“Histological and Morphometric Analysis of Fish in Streams in Monroe County, IN”

“Barn swallow physiological bioeffects assessment, Grand Calumet River and Indiana Harbor Canal, Lake County, Indiana”

“Patoka River National Wildlife Refuge - Follow-up investigation of problematic contaminant concerns found during the baseline investigation”

“Tree swallow bioeffects assessment, multiple PCB sites in Bloomington, IN”

“Histopathological impacts of PCBs on passerines nesting at the Westinghouse PCB sites, Monroe, Owen, Greene, Martin and Lawrence Counties, Indiana”

US EPA GLNPO Sub-contract under MSU TOSC Grant, 2002 – 2003, \$12,000 for sub-contract.

US Department of Defense, Jefferson Proving Ground Technical Assistance for Public Participation, Contract with Henshel EnviroComm, 1999 – 2003, \$100,000

Indiana Department of Higher Education Eisenhower Profession Development Grant 2001-2002, \$15,000, “SPECIES - Teachers”

US EPA Environmental Community Internship Fellowship 2001, 2002, \$5,300, (Granted to Indianapolis Urban League Environmental Coalition; Intern: Jeremiah Brown; D Henshel primary mentor/grant red tape)

US EPA Environmental Justice Small Grant (Granted to Indianapolis Urban League Environmental Coalition - IULEC), 1999 – 2001, \$20,000,

“GIS Database Development and Urban Community Education”

US Fish and Wildlife Service, Upper New York State Field Office, 1997, \$16,363,
Adverse effects related to environmental contaminants as seen in developing organisms.
Histopathology of Hudson River Tree Swallows”

Indiana University Outstanding Junior Faculty Fellowship/Award, 1996 – 1997, \$12,500

US Fish and Wildlife Service, 1996 – 1997, \$7,824,
“Double-Crested Cormorant Brain Asymmetry Analysis”

Pennsylvania Cooperative Fish and Wildlife Research Unit, Pennsylvania State University, 1995 – 1997, \$25,000, “Measuring tree swallow brains”

Indiana University Summer Faculty Fellowship, 1996, \$6,500, “Effects of PCBs and PAHs on avian wildlife: an integrated, multi-level analysis”

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Indiana University Intercampus Research Fund, 1995-1996, \$9,500 (With Elliott Blumenthal)
"Dioxin effects on protein kinase C and tyrosine kinase in the early embryo"

Miles, Inc., Alternative to Animals Research Grant; City of Berkeley, Citizen's Humane Commission, 1995, \$19,000, "Development of an alternative assay for teratogenicity testing"

US Fish and Wildlife Service, 1993 – 1995, \$21,450, "The reproductive and developmental toxicity of TCDD-containing soils in the domestic chicken"

US Fish and Wildlife Service, 1993 – 1994, \$7,600, "Assessment of exposure, depuration and bioeffects in four deformed bald eaglets in Michigan"

US Army Corps of Engineers, 1993 – 1994, \$59,831, "Preliminary assessment of health risks associated with the Crane Naval Surface Weapons Center"

Biomedical Research Support Grant, 1994, \$7,500, "Developmental neuro- and embryotoxicity of dioxin-like compounds"

Overseas Conference Fund Travel Grant (Indiana University) 1994, \$600

Arde Bulova Foundation Grant, 1993 – 1994, \$3,000, "The effects of dioxin on the developing avian embryo"

Indiana University Bloomington Summer Faculty Fellowship, 1993, \$6,500, "The effects of dioxin on the developing avian embryo"

Sustainable Development Research Initiative Grant (author, contact person, and co-investigator) funded by the British Columbia Science Council and the British Columbia Environment Ministry, 1991 – 1992, \$56,500, "Development of a toxic/hazardous waste biomonitoring assay"

National Science and Engineering Research Council (NSERC)-Industrially Oriented Research Grant (author and co-investigator; John Steeves, P.I.), 1990 – 1992, \$24,000, "The effects of dioxin on the developing avian embryo"

British Columbia Environment Ministry, 1990, 1991, 1992, \$36,000 total, "Analysis of the enhanced sensitivity of chicken embryos to dioxin"

Wildlife Toxicology Fund Grant (author and co-investigator; John Steeves, P.I.), 1990-1991, \$40,000, "The effects of dioxin on the developing avian nervous system"

Private Grants from: Fletcher-Challenge Canada, 1990 – 1991, \$8,000

MacMillan-Bloedel Ltd., 1990 – 1991, \$8,000

Canfor Corporation, 1990 – 1991, \$8,000

Private Grants from: B.C. Wildlife Federation, 1990, \$250

Northwest Territories Wildlife Federation, 1990, \$150

Washington University Institutional Grant, 1986 – 1987

National Eye Institute Vision Training Grant, 1983 – 1986

National Society to Prevent Blindness Grant, 1983 – 1984, \$10,000

National Institutes of Health - Pharmacology Training Grant, 1981

National Institutes of Health - Neuropharmacology Training Grant, 1980 – 1981

TEACHING ASSIGNMENTS

Indiana University, School of Public and Environmental Affairs, Bloomington, IN

1. E300 Introduction to Environmental Science (1993)
2. E311 Introduction to Risk Assessment and Risk Communication (1999, 2001, 2006 [F,S in 2006])
2. E400/E555//E441/E541 Toxicology and the Media//Controversies in Environmental Health (1993, 1995, 1997)
3. E412/E512 Risk Communication (1994, 1996, 1998, 2001, 2004, 2006)
4. E410 Undergraduate Introduction to Environmental Toxicology (1994 - 1998, 2000-2003, 2005, 2007)
5. E520 Graduate Environmental Toxicology (1992 - 1998, 2000-2005, 2007)
6. E560 Risk Decision Analysis (1995)
7. V600 Environmental MSES/MPA Capstone (2002, 2005, 2006)
7. E680 Seminar in Environmental Science (1993 - 1995, 1998, 2005)
8. V691 Workshop in Public Policy (2004)
9. E710/E555 Topics Courses: Dioxins and Endocrine Disruption (1997), Ecological and Aquatic Toxicology (2003), Developmental Neurotoxicology (2005)
10. Environment 99, SPEA sponsored High School Summer Program

Readings Courses

Environmental Equity and Toxicology (Lisa Harris), Spring 1993
Neurotoxicology (Ana Boischio), Spring 1993
Risk Assessment (Kara Morgan), Spring 1994
Biomarkers and their use in Environmental Impact Assessment (Minerva Mercado), Fall 1995
Risk Communication and Hazardous Waste Siting (David Murphree), Fall 1995
Risk Assessment and Environmental Regulations (Mary Beth Schmucker), Fall 1995
Dioxins and Environmental Estrogens (Chris Gabrys), Spring 1997
Environmental Pollutants and Societal Implications (Bill Price), Fall 1997
NIR Light Therapy: Effects of Dioxin on ATP Synthesis (Jill Franzosa), Spring 2005
NIR Therapy: Reduction in Embryo Mortality (Ronnie Yeager), Spring 2005, Fall 2006
NIR Therapy: Biochemical Oxidative Stress Impacts On Embryonic Kidney And Liver (Jinhwan Lim), Spring, Summer, Fall 2006
Analysis of Deformities in the Yellowstone National Park Region (Mary Ruhter), 2007

Laboratory Training Courses

L490 / E490 Undergraduate Laboratory Biology Research (Fall 1995 - Present, every semester including most summers)

Range: 1 - 8 L490/E490 students per semester, including summers

Guest Lectures

V691 Workshop in Public Policy, Spring 2004
L105 Agricultural Biotechnology, Spring 2000, 2001
E200 (Energy Technology and Policy), Spring 1993
E272 Environmental Science, Fall 2002, Spring 1999, 2003, 2004
E300 Introduction to Environmental Science, Fall 1993
V520 Environmental Policy Analysis, Spring 1995
V550 Negotiation and Dispute Resolution for Public Affairs, Fall 1995
E560 Risk Decision Analysis, Spring 1993, 1994, 1997
E560 Risk Decision Analysis, Co-instructor for special session at the Higher School of Economics, Moscow, Russia 2006
V664 Seminar in Policy Analysis, Spring 1998

Special Teaching - Related Activities

Indiana University – Bloomington Environmental Literacy and Sustainability Initiative:
- Coordinating Committee, 2005 - Present
- Institutional Structure Definition Subcommittee, 2004 – Present
- Participant and Presenter in the Teaching Freshman Environmental Literacy Seminar and Workgroup, 2003 – Present

University of British Columbia, Department of Zoology, Vancouver, B.C., Canada
Lecturer/Course Master: Animal Physiology, Fall 1989
Guest Lectures: Environmental Physiology, Fall 1990

University of British Columbia, Faculty of Agricultural Sciences, Vancouver, B.C., Canada
Guest Lectures: Animal Genetics, Spring 1989

Washington University Medical School, Department of Biology, St. Louis, MO
Neurophysiology (teaching assistant and guest lecturer), 1983
Comparative Vertebrate Anatomy and Development (teaching assistant), 1980-1981

Brown University, Department of Physics, Providence, RI
Introductory College Physics (self-paced; proctor [section teacher]), 1975 - 1978

SERVICE

University Committee and Organization Service

IUB Campus Level Service

Bloomington Faculty Council, Research Affairs Committee, 2005 - Present
Indiana Daily Student Opinion Forum member, 2005

Grant-in-Aid Review Committee, 2005
Council on Environmental Stewardship, *SPEA representative*, 2003 - 2006
Women in Science Program (WISP) Advisory Board, *Member*, 2000 - 2002
WISP Fellowship Selection Committee, 2001
Ad Hoc SPEA/COAS/Sch.Ed. committee on Science Outreach, *Member*, 1998-1999
Sustainable Development/Environmental Justice Workgroup – IUB *Chair/Coordinator*
Sponsored by SPEA and the Global Change Center, 1996 - 1997
Summer Faculty Fellowship Selection Committee, *Member*, 1994
Women in Science and Engineering Campus Team, *Member*

Public Service

International:

Second International Conference on Environmental Bioindicators (April 2006) *Coordinating Committee* (2005-2006)

Co-Teacher (Risk Assessment 40 hr class) and Lead Research Dissemination Team Member, USAID funded project with the Higher School of Economics (HSE), Moscow, Russia. (Project: 2005-2007; Trips: October 2005, March, June 2006).
Project Goal: To help the HSE develop into a Western-Style Policy Think Tank. (M. Pirog, PI)

Commission for Environmental Cooperation, Invited participant as public representative to public meeting of the Sound Management of Chemicals Working Group. San Diego, CA, March 2005.

Participant, Trip to the North West Academy of Public Administration (NWAPA), St. Petersburg, Russia. Participated in two-week long trip to NWAPA and affiliate academy in Vyborg, Russia. Delivered lectures, interviewed prospective Russian visitors to the US, participated in NWAPA-sponsored International Workshop on Public Administration and discussed possible future collaborations with science colleague from Vologda, Russia, and policy colleagues from Finland. University Partnership Agreement grant funded by the US State Department (J. Mikesell, PI). November, 2003

Member, Science Advisory Board (SAB) of the International Joint Commission on the Great Lakes (IJC), 1997 - 2001, and of the IJC-SAB Workgroup on Ecosystem Health, 1997 - 2002
- *Planning Committee and Presenter*, International Joint Commission on the Great Lakes Science Advisory Board's Workgroup on Ecosystem Health: Workshop on Methodologies for Community Health Assessment in Areas of Concern, October 4-5, 2000, Windsor, ONT
- *Facilitator*, Discussion on Community Responsiveness of Lakewide Management Plan Process, IJC Biennial Meeting, Milwaukee, WI, September, 1999

- Planning Committee and Facilitator, Workshop on "Great Lakes Lakewide Management Plans" Windsor, ONT, Canada, February 1999

Voting Member of the Multiple Stakeholder's Working Group on Pulp and Paper Management in British Columbia, Canada (1991-1992)

Member, Great Lakes Wildlife Bioeffects Group (1992- 1998)

Member, UBC Hazardous Waste Research Group of the B.C. Sustainable Development Research Initiative, Vancouver, BC, Canada (1990-1992)

National:

Invited Expert, EPA Science Advisory Board Ecological Processes and Effects Committee Workshop on Ecological Risk Assessment – An Evaluation of the State-of-the-Practice, Washington, DC, Feb 7-8, 2006

Facility Review Team, National Oceanic and Atmospheric Administration (NOAA) Northwest Research Science Center, July 2005

Adjunct Member, National Academy of Public Administration Standing Panel on Social Equity (2000 - Present)

Grand Jury Judge, 2002, and Society for Toxicology and Chemistry Special Awards Judge (team leader), 2003, 2004, 2006, Intel Science and Engineering Fair

Member, National Research Council Committee on Assessment of Risks from Remediation of PCB-Contaminated Sediment (1999 - 2001)

Environmental Protection Agency Invited Expert activity:

*Food Quality Protection Act (FQPA) Science Advisory Panel (SAP) (1998 -)
EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Endocrine Disruptors Screening and Testing Advisory Committee (EDSTAC) Report Review Panel (1998 - 1999).*

Short Course Instructor:

"Biomarkers: Potential Neurotoxicological Biomarkers, Guidelines for Future Biomarkers Development" (2 sections of the course) Society for Environmental Toxicology and Chemistry National Meeting Washington, DC, November 17, 1996

*"Ecological Risk Assessment" (section on Effects Assessment)
Society for Environmental Toxicology and Chemistry, Ohio Valley Chapter Regional Meeting Richmond, KY, June 6 - 7, 1996*

Invited panel member, EPA Workshop on Environmental Estrogens and Risk Assessment

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Panels: Neurotoxicology and Dose-Response Relationships Raleigh, N.C., April 10
- 14, 1995

Presented an Invited Statement before the National Advisory Committee for Environmental
Policy and Technology Superfund Evaluation Committee, September 20, 1993

American Society for Testing and Materials (ASTM), Committee E47 Biological Effects and
Environmental Fate Symposium-Related Coordination Service

- *Symposium Co-Chair*, Fifth Symposium on "Environmental Toxicology and Risk
Assessment: Biomarkers and Risk Assessment," Denver, CO April 3-5, 1995
- *Symposium Chair*, Eighth Symposium on "Environmental Toxicology and Risk
Assessment: Standardization of Biomarkers for Endocrine Disruption and
Environmental Assessment," Atlanta, GA April 19 - 23, 1998
- *Symposium Organizing Committee*, Special Symposium on "Modelling and
Measuring the Vulnerability of Ecosystems at Regional Scales for Use in Ecological
Risk Assessment and Risk Management," Co-sponsored by the US Environmental
Protection Agency Seattle, WA, August 17 - 20, 1998
- *Editorial Advisory Committee* for Ensuing Special Issue of Environmental
Toxicology and Chemistry, 2000

Volunteer scientist, Science by Mail, 1991 - 1997

State:

Indiana Environmental Justice Advisory Committee, 1999 - Present

Indianapolis Urban League:

Environmental Coalition (IULEC) *Charter Member, Steering Committee Member*,
1997 - Present
Program Committee, *Member*, 2002 - 2004

Indiana Faith-Based Global Climate Change Campaign, *Steering Committee Member*, 2000
- 2003, *co-coordinator for two public education workshops*: 2001, 2002

Indiana Interfaith Environmental Task Force

Board of Directors, Charter Member, 2004 - Present

Indiana Junior Academy of Science Outstanding Junior Scientist, *Abstract Reviewer and
Judge*, 2002, 2003, 2004, 2005, 2006

Jefferson Proving Ground Restoration Advisory Board (DOD Funded) /
Save the Valley Technical Support Team

Technical Support, 1999 - Present

EPA/IDEM/DOD/RAB Remedial Investigation/Feasibility Study Review Team, 2001

- 2003

Army Corps of Engineers coordinated *Ad Hoc* Committee on air monitoring for the proposed Indiana Harbor Canal Dredge Project, 2001 - 2002

Indiana Core 40 High School Environ Science Competency-Writing Team, 1997

Indiana Brownfield's Policy Review Group, 1995

Local:

Center for Justice and Mediation / Victim Offender Remediation Program
Volunteer mediator, 2004- Present; Education Committee, 2004 - present

Citizens Information Committee, Bloomington, IN, 1992 - Present
(Addresses and is the community contact point for the EPA with regards to the Bloomington PCB sites)

Save Our Southside Neighborhood, Environmental Coordinator, 1999

Jackson Creek Middle School, Technology Committee Parent Rep, 1999 -2000

Rogers Elementary School, Library Volunteer and Math Club Coord., 1999 - 2001

Brownie Math and Science Days Volunteer, Tulip Trace Girl Scout Council
Pollution Room designer and coordinator, 1995, 1999
Biology room volunteer and planner, 1996-1998, 2000-2001, 2002, 2006

Bloomington Progressive Elementary School, Board member, 1993-1994

Paid Consultantships and Honoraria

Government

- US Department of the Interior, Fish and Wildlife Service, National Fisheries Contaminant Research Center (now the Midwest Science Center of the National Biological Services of the United States Geological Survey), 1993

Industry

- Ice, Miller, Donadio and Ryan, 1995
- Barrett and McNagny, 1993 - 1994
- Reilly Industries, Inc., 1993
- Siemens Pacesetter, Inc, 1993

Academia

- University of Louisville, Department of Biology, 2002
- University of Wisconsin - Milwaukee Marine and Freshwater Biomedical Research Center, 1993

Peer Review Activities

Editorial Board

Environmental Bioindicators Journal
Environmental Communication

Peer Reviewing for Journals and Technical Publications

American Society for Testing and Materials (ASTM) Committee E47, Special
Technical Publications (STP)
Biochemical Pharmacology
Environmental Health Perspectives
Environmental Health Perspectives Supplements
Environmental Monitoring and Assessment
Environmental Science and Technology
Environmental Research
Environmental Toxicology and Chemistry
Journal of Aquatic Ecosystem Health
Journal of Toxicology and Environmental Health
Ohio Journal of Science
Toxicology and Applied Pharmacology
Toxicological Sciences

“Best Practices for Effective Public Involvement in Restricted Use Decommissioning of NRC Licensed Facilities”, submitted to DOD by the US Institute for Environmental Conflict Resolution, *Interviewee and Reviewer*

“Quantitative Dose-Response Modeling of Dioxins-Like PBTs in Laboratory and Field Studies of Avian Wildlife”, submitted to EPA by the Eastern Research Group Inc.

Grant Reviewer

EPA Extramural Grants Program
EPA Intramural Grants Program
EPA Environmental Education Grants Program
EPA STAR Fellowship Program
March of Dimes, Basil O'Connor Fellowship Program
Sea Grant (Wisconsin Sea Grant Institute) Program
Army Corps of Engineers EDRC Program

Textbook Reviews

Introduction to Environmental Toxicology by Landis and Yu (3 chapters)

Lectures/Presentations at Professional Meetings/Workshops/Symposia/Public Venues for which no published abstracts are available. (Presentations for which abstracts are published are listed under Publications at International/National Meetings)

- 4/06 *Invited Panelist Presenter*, Bhopal Then and Now, A Toxicological Travesty, Panel on Bhopal Today, IUB Association for India's Development
- 3/06 *Invited lecture*, Environmental Endocrine Disruption, Calvin College
- 1/06 *Invited lecture*, DU and Public Policy, Franklin College, Franklin, IN
- 11/05 *Panelist Presenter*, Environmental Justice and Land Use: Transportation and
- 7/06 Public Health, Workshop on Where Environmental Justice and Land Use Planning and Zoning Collide: A One Day Workshop for Local Officials, Chicago, IL; Albuquerque, NM
- 10/05 *Invited panel presenter*, Measuring Environmental Literacy and Sustainability Learning, Panel on Disciplinary Perspectives on Evidence: Environmental Literacy and the Assessment of Student Learning, Scholarship of Teaching and Learning Workshop, Indiana University, Bloomington, IN
- 10/05 *Invited lecture*, Science policy research and development of policy, Higher School of Economics, Moscow, Russia.
- 5/05 *Invited Lecture*, Organochlorine Toxicity: Mechanisms and New Directions, Renal Research Rounds, IUPUI Medical School, Indianapolis, IN
- 4/05 *Invited speaker*, Asbestos and Health, Bloomington Earth Week Celebrations, Bloomington, IN.
- 2/05 *Invited panel presenter*, Environmental Justice Research, Methods and Case Studies, Panel on Environmental Justice in the 21st Century, Environmental Management Association Workshop, Indiana University, Bloomington, IN
- 1/05 *Invited Panel Presenter*, DDT and PBB: Literature Update; Pine River Task Force Citizen's Advisory Group Environmental Health Symposium, Alma, MI
- 10/04 *Invited speaker*, Scared to Know: Focus on Environmental Health, Zeta Phi Beta Sorority, Indiana University, Bloomington, IN
- 5/04 *Lecturer*, Depleted Uranium and Human Health, Depleted Uranium Forum, 5th International Organizing Conference on Iraq, Bloomington, IN
- 11/03 *Lecturer*, Environment and Policy, Northwest Academy of Public Administration (NWAPA), St. Petersburg, Russia
- 9/03 *Invited Panel Presenter*, Health as a Social Equity Indicator, Third Social Equity Leadership Conference, sponsored by the National Academy for Public Administration Standing Panel on Social Equity In Governance, Cincinnati, OH
- 6/03 *Poster Presentation*, Using data mining to evaluate the linkage between public health and environmental exposures, Association for Science in the Public Interest Annual Meeting, Fairfax, VA
- 6/03 *Invited Panelist and Participant*, Institutional controls at Jefferson Proving Ground: The problems with depleted uranium, Workshop on Federal Facilities Cleanup Forum: Technical Information and Citizen's Forum, University of Massachusetts, Amherst, MA
- 4/03 *Invited Panelist and Presenter*, Review of Environmental Justice Methodologies, Symposium on Environmental Justice, Valparaiso Law School, Valparaiso, IN
- 2/03 *Poster Presentation*, Correlation Between Environmental PCBs and Mercury Concentrations and Age-Standardized Disease Morbidity and Mortality Rates for the Seventeen Canadian Great Lakes Areas of Concern, (with J. Klump),

-
- Workshop on Mercury and Cerebral Palsy, International Joint Commission Science Advisory Board and Workgroup on Ecosystem Health, Windsor, ONT, Canada
- 11/02 *Invited Presenter*, The effect of dioxins and PCBs on avian growth and development: A cross-correlation between laboratory and wildlife-based field studies, University of Louisville, Department of Biology Departmental Seminar, Louisville, KY
- 6/02 *Invited Presenter*, Addressing Environmental Justice Issues in Indianapolis, Indiana Society for Public Administration, Indianapolis, IN
- 6/02 *Invited Panelist and Participant*, Jefferson Proving Ground update, Panel Session on Information Access for Effective Cleanup. Federal Facilities Clean-up Workshop 2002: Empowering Community-Science Partnerships for Effective Military & Nuclear Waste Cleanup, Oakland, CA
- 5/02 *Invited Presenter*, Health effects of pollutants released during open air trash burning, Indiana Recycling Coalition Annual Mtg, Indianapolis, IN
- 4/02 *Invited Presenter*, Environmental Justice Assessment, Northwest Indiana Environmental Justice Workshop, East Chicago, IN
- 4/02 *Presentation*, Correlation of Environmental PCB and Mercury Data with Canadian Infantile Cerebral Palsy Morbidity Incidence Data. (with J. Klump), Consultation on the Effects of Methylmercury on Human Health, International Joint Commission Science Advisory Board and Workgroup on Ecosystem Health, Ann Arbor, MI
- 11/01 *Planning Committee member and Presenter*, Global Climate Change: The basics of the controversy, Workshop on Climate Change: The Environmental Crisis in Indiana and the World, Sponsored by the Indiana Faith-Based Global Climate Change Campaign, Bloomington, IN
- 9/01 *Invited Participant and Presenter*, Risk assessment of the proposed Indiana Harbor and Canal dredging project, IU Northwest Environmental Justice Conference, Gary, IN
- 7/01 *Invited Participant and Presenter*, Is there an Environmental Justice issue in Indianapolis?, National Academy of Public Administration Standing Panel on Social Equity in Governance Mini-Conference on Social Equity and Environmental Justice, Indianapolis, IN
- 7/01 *Invited Participant*, Jefferson Proving Ground: Cooperation Between DOD and Citizens?, Federal Facilities Cleanup Forum: Technical Information and Citizen's Forum, Amherst College, Amherst, MA
- 4/01 *Invited Presenter and Discussant*, Using the precautionary principle when applying bioavailability, National Research Council Committee on Bioavailability of Contaminants in Soils and Sediments, Washington, DC
- 3/01 *Planning Committee member and Presenter*, "The basic science of global climate change" Workshop on Climate Change: The Environmental Crisis in Indiana and the World, Sponsored by the Indiana Faith-Based Global Climate Change Campaign, Indianapolis, IN
- 3/01 *Invited Lecturer*, Breast Cancer and Environmental Chemicals, Olcott Center for Breast Health, Bloomington, IN
- 12/00 *Co-Organizer and Presenter*, Health effects of pollutants found in air, Workshop on What is in the Air You Breathe?, Sponsored by the Indianapolis Urban League Environmental Coalition, Marion County Department of Health, and the Indiana Department of Environmental Management, Indianapolis, IN
- 10/00 *Presenter*, Interim report on the Great Lakes states health statistics databases, Workshop on Methodologies for Community Health Assessment in Areas of

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- Concern Sponsored by the International Joint Commission Science Advisory Board, Windsor, ONT
- 10/00 *Invited Participant (Panel of Experts), Workshop on Avian Vacuolar Myelinopathy*. Sponsored by the USGS Biological Resources Discipline National Wildlife Health Center, A Madison, WI.
- 5/00 *Presenter*, Review of JPG site contamination and recommendations for the RI/FS, Jefferson Proving Ground Remediation Advisory Board and other stakeholders (Public meeting), Madison, IN
- 3/00 *Invited Presenter*, Health effects of NWI air pollutants, Workshop on Clearing the Air: Strategy meeting on cleaning Indiana's air and water resources, Sponsored by the Sierra Club, Hoosier Environmental Council and Grand Cal Task Force, Calumet, IN
- 2/00 *Invited Lecturer*, Effects of PCBs on Developing Avian Embryos, Clemson University, Pendleton, SC
- 8/99 *Featured Presenter*, Developmental PCB Health Effects on Passerines, Conference on Wildlife Applications to Remedial Decision-Making, hosted by Texas Tech University, co-sponsored by the EPA and FWS, Denver, CO
- 3/99 *Invited Lecturer*, Effects of TCDD on Developing Avian Embryos, Ecology Working Group, Indiana University, Bloomington, IN
- 1/99 *Invited Lecturer*, PHAH-induced avian birth defects, Institute Nationale de Recherche Scientific - Sante, Montreal, QUE
- 10/98 *Invited Participant*, Multi-State Working Group on Environmental Management Systems Roundtable Discussion on Research Strategies Regarding Environmental Management Systems. Sponsored by the Environment Council and the JL Kellogg Graduate School of Management, Northwestern University, Evanston, IL.
- 4/98 *Chair and Invited Presenter*, Symposium on Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disruption and Environmental Assessment Sponsored by American Society for Testing and Materials Comm. E47 on Biological Effects and Environmental Fate, Atlanta, GA
- 9/97 *Participant*, Wingspread Conference on the Policy Implications of New Evidence Regarding Toxic Substances and Human Health, Sponsored by the International Joint Commission on the Great Lakes, Racine, WI
- 9/97 *Presenter*, Effects of PCBs on Barn Swallows from the Grand Calumet River Area of Concern, International Joint Commission - sponsored Lakewide Management Plan and Remedial Action Plan Workshop on Human Health and Aquatic Life Considerations - Examining the Effects of Persistent Toxic Substances, Cleveland, OH
- 9/97 *Presenter*, Service Learning in the Classroom, Collaborative Learning Workshop, Indiana University, SPEA Fall Retreat, Bloomington, IN
- 6/97 *Coordinator*, Annual Meeting of the Ohio Valley Chapter of the Society for Environmental Toxicology and Chemistry, Bloomington, IN
- 9/96 *Presenter*, PCB-induced impacts on avian nestlings, development of a suite of monitoring indicators, International Joint Commission on the Great Lakes Workshop on Environmental Results: Monitoring and Trends of Effects Caused by Persistent Toxic Substances, Windsor, ONT
- 6/96 *Session Moderator and Presenter*, Effects of TCDD on avian brain development, and Effects of TCDD on avian hatchling behavior, Session on "Non-Human Health Effects" MIT Conference on The Future Uses of Chlorine: Issues in Education, Research and Policy, Boston, MA
- 5/96 *Presenter*, TCDD impacts on early avian brain development, International Association for Great Lakes Research, special session on Endocrine and

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- 4/96 Neurotoxicological Effects of Dioxin-Like Compounds, Toronto, ONT
Session Chair and Presenter, Symposium on Environmental Toxicology and Risk Assessment, Sponsored by American Society for Testing and Materials
Committee E47 on Biological Effects and Environmental Fate, Orlando, FL
- 3/96 *Invited Lecturer*, PCB-induced developmental impacts: Effects on brain
development, Institute for Environmental Studies, Lecture Series on
Neurotoxicology, University of Illinois, Urbana, IL
- 2/96 *Invited Presenter*, Great Lakes Wildlife Bioeffects Group Spring Meeting,
Dayton, OH
- 4/95 *Co-chair*, Symposium on Environmental Toxicology and Risk Assessment -
Focus on Biomarkers Sponsored by American Society for Testing and Materials
Committee E47 on Biological Effects and Environmental Fate, Denver CO
- 1/95 *Invited Lecturer*, TCDD-induced brain asymmetry, Department of Biology,
Indiana University/Purdue University, Fort Wayne, IN
- 10/94 *Presenter*, Great Lakes Wildlife Bioeffects Group Fall Mtg, Madison, WI
- 3/94 *Presenter*, Great Lakes Wildlife Bioeffects Group Spring Mtg, Lansing, MI
- 1/94 *Invited Lecturer*, Indiana University Medical Sciences Program, Bloomington, IN
- 12/93 *Invited Presenter and Participant*, TCDD-induced avian brain asymmetry,
Workshop on the Chemically induced alterations in development: The wildlife/
human connection Wingspread Conference Center, Racine, WI
- 5/93 *Invited Lecturer*, Effects of PCBs and TCDD on early brain development, Center
for Great Lakes Research, Milwaukee, WI
- 4/93 *Invited Lecturer*, TCDD-induced avian brain anomalies, National Fisheries
Contaminant Research Center, US FWS, Columbia, MO
- 10/92 *Presenter*, Great Lakes Wildlife Bioeffects Group Fall Meeting, Kalamazoo, MI
- 6/92 *Presenter*, Hazardous, Special and Toxic Wastes Workshop; Sustainable
Development Research Initiative, Vancouver, BC, Canada
- 4/91 *Invited Lecturer*, University of British Columbia, Department of Zoology,
Vancouver, B.C.
- 3/91 *Invited Lecturer*, Louisiana State University Department of Pharmacology and
Toxicology, Shreveport, LA
- 3/91 *Invited Lecturer*, Indiana University School of Public and Environmental Affairs,
Bloomington, IN
- 2/91 *Presenter*, Brain asymmetry in heron hatchlings correlated with TCDD exposure,
Environmental Effects of Pulp Mill Effluent Workshop, BC Ministry of the
Environment, Vancouver, BC, Canada
- 11/89 *Presenter*, BC Great Blue Heron Study Group Workshop, University of British
Columbia/Canadian Wildlife Service, Vancouver, BC, Canada

PUBLICATIONS

Books, Peer-Reviewed Articles, Peer-Reviewed Monographs, and Book Reviews; Published and In Press

Yeager, R.L., Parkhurst, D.F. and Henshel, D.S. (2007) Graphical Methods for Exploratory Data Analysis with Complex Data Sets. **BioScience**, accepted, in press. (IF 2005: 4.708, citation half life 7.9 yr)

Yeager, R.L., Oleske, D.A., Sanders, R.A., Watkins III, J.B., Eells, J.T., Henshel, D.S. (2007) Melatonin as a principle component of red light therapy. **Medical Hypotheses**. Accepted, in press. (IF 2005: 0.92, citation half life 5.2 yr)

Lim, J., DeWitt, J.C., Sanders, R.A., Watkins III, J.B., and Henshel, D.S. (2007) Suppression of endogenous antioxidant enzymes by 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin-induced oxidative stress in chicken liver during development. **Arch. Environ. Contam. Toxicol.** In press. (IF: 1.408; citation half life: 7.9 yr)

Yeager, R.L., Lim, J., Millsap, D.S., Jasevicius, A.V., Sanders, R.A., Whelan, H.T., Watkins, J.B.III, Eells, J.T., Henshel, D.S. (2006) 670 nm Light Treatment Attenuates Dioxin Toxicity in the Developing Chick Embryo. **J. Biochem. Molec. Toxicol.** 20(6):271-8 (IF 2005 2.0; citation half-life 4.2yr)

Yeager, R.L., Oleske, D.A., Millsap, D.S., Henshel, D.S. (2006) Severe craniofacial malformations resulting from developmental exposure to dioxin. **Repro Toxicol** 22(4):811-812 On-line 7/22/06 (IF 2005:1.635; citation half-life 5.9 yr)

DeSmet, K.D., Paz, D.A., Eells, J.T., Wong-Riley, M.T.T., Henry, M.M., Buchmann, E.V., Connelly, M.P., Dovi, J.V., Liang, H.L., Henshel, D.S., Yeager, R.L., Millsap, D.S., Lim, J., Gould, L.J., Das, R., Jett, M., Hodgson, B.D., Margolis, D., Whelan, H.T. (2006) Clinical and Experimental Applications of NIR-LED Photobiomodulation. **Photomed Laser Surgery** 24(2):121-128. (IF 2005 0.784 – New name for journal in 2005)

Yeager, R.L., Franzosa, J.A., Millsap, D.S., Angell-Yeager, J.L., Heise, S.S., Wakhungu, P. Lim, J., Whelan, H.T., Eells, J.T., Henshel, D.S. (2006) Embryonic Growth and Hatching Implications of Developmental 670 nm Phototherapy – Dioxin Co-Exposure. **Photomed Laser Surgery** 24(3): 410-413

DeWitt, J., Millsap, D.M., Yeager, R.L., Heise, S.S., Sparks, D.W., and Henshel, D.S. (2006). External heart deformities in passerine birds exposed to environmental mixtures of PCBs during development. **Environ Toxicol Chem** 25(2): 541-551. (IF: 2.414, citation half-life 6.3 yr)

Yeager, R.L., Franzosa, J.A., Millsap, D.S., Lim, J., Heise, S.S., Wakhungu, P., Whelan, H.T., Eells, J.T., and Henshel, D.S. (2006) Survivorship and Mortality Implications of Developmental 670 nm Phototherapy – Dioxin Co-Exposure. **Photomedicine and Laser Surgery** 24:29-32.

Henshel, D.S., Sparks, D.W., Simon, T.P., and Tosick, M.J. (2006). Age Structure and Growth of Creek chub (*Semotilus atromaculatus*) (Mitchill) in PCB-contaminated streams in Indiana. **J. Fish Biol.** 68:44–62 doi:10.1111/j.1095-8649.2005.00875.x (IF: 1.188, citation half life 9.5 yr)

Boeglin, M.L., Wessels, D., and **Henshel, D.S. (2006).** An investigation of the relationship between air emissions of volatile organic compounds and incidence of cancer in Indiana counties. **Environ Res** 100(2):242-254. doi:10.1016/j.envres.2005.04.004. (IF 2005: 2.324, citation half life 7.5 yr)

Henshel, D.S and Sparks, D.W. (2006). Site-specific PCB-linked Interspecies Differences in Organ Somatic Indices. **Ecotoxicology** 15:9-18. DOI: 10.1007/s10646-005-0038-0. (IF 2005: 1.552 2005, citation half life 5 yr)

Yeager, R.L., Franzosa, J.A., Millsap, D.S., Angell-Yeager, J.L., Heise, S.S., Wakhungu, P. Lim, J, Whelan, H.T., Eells, J.T., **Henshel, D.S. (2005)** Effects of 670 nm Phototherapy on Development. **Photomedicine and Laser Surgery** 23:268-272.

DeWitt, J.C., Meyer, E.B., **Henshel, D.S. (2005)** Environmental toxicity studies using chickens as surrogates for wildlife: Effects of vehicle volume. **Arch Environ Contam Toxicol** 48(2):260-269.

DeWitt, J.C., Meyer, E.B., **Henshel, D.S. (2005)** Environmental toxicity studies using chickens as surrogates for wildlife: Effects of injection day. **Arch Environ Contam Toxicol** 48(2):270-277.

Henshel, D.S. (2004) Control of glutathione synthesis in early embryo development. **Toxicol Sci.** 81(2):257-259, doi: 10.1093/toxsci/kfh227 (IF 2005: 3.088, citation half life 3.8 yr)

B. Stanton, B., DeWitt, J., **Henshel, D.**, Watkins, S. Lasley, B. (2003) Fatty acid metabolism in neonatal chickens (*Gallus domesticus*) treated with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) or 3,3',4,4',5-pentachlorobiphenyl (PCB-126) in ovo, **Comp Biochem Physiol C. Toxicol Pharmacol** 136(1):73-84. (IF 2005: 1.456, citation half life 7.7)

Henshel, D.S., DeWitt, J., and Troutman, A. (2002). Chicken Embryos for Teratology Studies, **Current Protocols in Toxicology**, MD Maines, ed. J Wiley and Sons, Sec. 13.4

Custer, T. W., C. M. Custer, R. K. Hines, K., L. Stromborg, P. D. Allen, M. J. Melancon, **D. S. Henshel. (2001)** Organochlorine contaminants and biomarker response in double-crested cormorants nesting in Green Bay and Lake Michigan, Wisconsin, USA. **Arch Environ Contam Toxicol** 40:89-100.

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Committee on Remediation of PCBs in Sediments (2001) **A Risk Management Strategy for PCB-Contaminated Sediments: Executive Summary.** National Research Council,

Washington, D.C. Released and presented to Congress and the EPA on January 4, 2001.

Boischio, A.A.P. and **Henshel, D.S.** (2000) Linear regression models on methyl mercury exposure during prenatal and early postnatal life among riverside people along the Upper Madeira River, Amazon. **Environmental Research Section A** 83(2): 150-61.

Boischio, A.A.P. and **Henshel, D.S.** (2000) Fish consumption, fish lore and mercury pollution - Risk communication for the Madeira River people. **Environmental Research Section A** 84:108-126.

Boischio, A.A.P., Cernichiari, E., **Henshel, D.** (2000) Segmental hair mercury evaluation of a single family along the Upper Madeira Basin, Brazilian Amazon. **Reports in Public Health (Cadernos de Saude Publica)** 16(3):681-6.

Henshel, D.S., Black, M, Harrass, M. eds. (1999) Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disruption and Environmental Assessment (8th Volume), ATSM STP 1364, American Society for Testing and Materials, Philadelphia, PA.

Henshel, D.S. (1999) Detailed Disruptor Data. **Trends in Endocrinology and Metabolism**, 10(5):201-204. (Book Review)

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Alonso, K.R., Peden-Adams, M.M., Liu, J.Y., Charbonneau, C., **Henshel, D.**, Dickerson, R.L. (1998) Effects of *in ovo* exposure to 2,3,7,8-TCDD in F1 generation adult chickens (*Gallus gallus*). **Chemosphere**. 37(9-12):1873-1883.

Henshel, D.S. (1998) Developmental and neurotoxic effects of dioxin and dioxin-like compounds on domestic and wild avian species. *Invited manuscript for invitation-only annual review issue* **Environ Toxicol Chem** 17(1):88 - 98

Custer, T.W., Hines, R.K., Stewart, P.M., Melancon, M.J., **Henshel, D.S.**, Sparks, D.W. (1998) Organochlorines, mercury and selenium in great blue heron eggs from Indiana Dunes National Lakeshore, Indiana. **J Great Lakes Res**, 24(1):3-11. (IF 2005: 1.023, citation half life >10 yr)

Henshel, D.S., Martin, J.W., DeWitt, J.C. (1997) Brain Asymmetry as a Potential Biomarker for Developmental TCDD Intoxication: A Dose-Response Study. **Environ Health Perspect**, 105(7):718-725. (IF 2005: 5.342, citation half life 5.7 yr)

Henshel, D.S., Hehn, B., Wagey, R., Vo, M., Steeves, J.D. (1997) The relative sensitivity of chicken embryos to yolk- or aircell-injected 2,3,7,8-tetrachlorodibenzo-p-dioxin, **Environ Toxicol Chem.**, 16(4):725 - 732.

Henshel, D.S., Martin, J.W., Norstrom, R.J., Elliott, J., Cheng, K.M., DeWitt, J.C. (1997) Morphometric brain abnormalities in double-crested cormorant chicks exposed to polychlorinated dibenzo-p-dioxins, dibenzofurans and biphenyls. **J. Great Lakes Res.**, 23(1):11-26.

Henshel, D.S., Sparks, D.W., Allen, C.A., Benson, K., Fox, C., Lam, Y., Sobiech, S.A., Wagey, R.. (1997) Preliminary results using the Early Embryo Teratogenesis Assay: a Comparison of Early Embryo Abnormalities with Late Embryo and Hatchling Teratogenic Changes," Environmental Toxicology and Risk Assessment: Modelling and Risk Assessment (6th Volume), ASTM STP 1317, F. James Dwyer, Thomas R. Doane, and Mark L. Hinman, Eds., American Society for Testing and Materials, 391-401.

Custer, T.W., Hines, R.K., Melancon, M.J., Hoffman, D.J., Wickliffe, J.K., Bickham, J.W., Martin, J.W., **Henshel, D.S.** (1997) Contaminant concentrations and biomarker response in great blue heron eggs from 10 colonies on the Upper Mississippi River, USA. **Environ Toxicol Chem.**, 16(2):260-271.

Bengston, D.A., **Henshel, D.S.**, eds. (1996) Environmental Toxicology and Risk Assessment: Biomarkers and Risk Assessment (5th Volume), ASTM STP 1306, American Society for Testing and Materials, Philadelphia, PA.

Henshel, D.S. (1996) An argument for the chicken embryo as a model for the developmental toxicological effects of the polyhalogenated aromatic hydrocarbons (PHAHs). Environmental Toxicology and Risk Assessment: Biomarkers and Risk Assessment (5th Volume), ASTM STP 1306, David A. Bengston and Diane S. Henshel, Eds., American Society for Testing and Materials, Philadelphia, pp. 219 - 229.

Dickerson, R.L., Hoover, J.A., Peden-Adams, M.M., Mashburn, W.E., Allen, C.A. and **Henshel, D.S.** (1996). Alterations in chicken embryonic development as a sensitive indicator of 2,3,7,8-tetrachlorodibenzo-p-dioxin exposure. Environmental Toxicology and Risk Assessment: Biomarkers and Risk Assessment (5th Volume), ASTM STP 1306, David A. Bengston and Diane S. Henshel, Eds., American Society for Testing and Materials, Philadelphia, PA 204 - 218.

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Boischio, A.A.P., **Henshel, D.S.** (1996) Risk assessment of mercury exposure through fish consumption by indigenous people in the Madeira river, Amazon, 1991. **NeuroToxicology**

17(1):169-176. (IF 2005: 2.576, citation half life: 6.6 yr)

Boischio, A.A.P., **Henshel, D.S.** (1996) Methylmercury exposure and food lore among and indigenous population along the Madeira river, Amazon. Human Ecological Approaches to Health, Humanekologiska, Skrifter 14, Avdelningen för Humanekologi, Göteborgs universitet, pp. 118 - 134.

Alonso, K.R., Peden, M.M., **Henshel, D.** And Dickerson, R.L. (1996) *In ovo* exposure to 2,3,7,8-TCDD results in delayed reproductive maturation in the domestic chicken. **Organohalogen Compounds** 29:195-199.

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Henshel, D.S., Miller, R.F. (1992). Catecholamine effects on dissociated Muller (glial) cells. **Brain Research** 575:208-214. (IF 2005: 2.296, citation half life >10 yr)

Henshel, D.S., Sattler, C., and Martin, J.E. (1982). Melatonin does not affect lutenizing hormone-releasing hormone binding to neonatal rat anterior pituitary membranes. **Neuroendocrinol** 34(6):421-6. (IF 2005: 2.65, citation half life >10 yr)

Publications - Submitted and in process

Submitted Papers

Yeager, R.L., Lim, J., Sanders, R.A., Oleske, D.A., Conklin, J.R., Millsap, D.S., Watkins, J.B. III, Eells, J.T., and **Henshel, D.S.** Energy and glutathione redox balance in developing brain after dioxin exposure and 670nm light treatment. Submitted to **Neuroscience Letters** Nov 2006. (IF 2005: 1.898, citation half life: 7.1 yr)

Henshel, D.S., Sparks, D.W., Simon, T.P., and Tosick, M.J. Reproductive Anomalies in Creek chub (*Semotilus atromaculatus*) (Mitchill) from PCB-contaminated streams in Indiana.

Submitted to **J Fish Biol.** Oct 2006.

Millsap, D.S., Wakhungu, P., Yeager, R.L., DeWitt, J.C., Heise, S.S., Sparks, D.W. and Henshel, D.S. Cardiac Hypertrophy in Five Passerine Species Developmentally Exposed to Environmental Mixtures of Polychlorinated Biphenyls (PCBs). Submitted to **EcoToxicology**. April 2006.

Papers undergoing revision as recommended by editors

DeWitt, J., Meyer, E.B., Henshel, D.S. Effects of 3,3',4',5-Pentachlorobiphenyl (PCB-126) or 2,3,7,8-Tetrachlorobenzo-p-dioxin (TCDD) Injected into the Airsacs of Chicken (*Gallus domesticus*) Eggs Prior to Incubation I. Effects of Injection Day

DeWitt, J., Meyer, E.B., Henshel, D.S. Effects of 3,3',4',5-Pentachlorobiphenyl (PCB-126) or 2,3,7,8-Tetrachlorobenzo-p-dioxin (TCDD) Injected into the Airsacs of Chicken (*Gallus domesticus*) Eggs Prior to Incubation II. Effects of Injection Volume.

Both submitted to **Environ Toxicol Chem.** (Revisions in process as recommended - to combine the papers into one - resubmission planned for this fall according to J DeWitt)

Melillo, P.R., Visser, N.T., Hoponick, J. Henshel, D.S. Correlations Between Ground Water Perchlorate Concentrations and Population Level Health Effects in California. Submitted to **Environmental Health Perspectives** (2 14 06.) Under revision as recommended for resubmission

Papers in Process (reviewed once, on hold for now)

Workman, A. Snider, S. and Henshel, D.S. Comparison of Cancer Mortality Data in Great Lakes Areas of Concern in Illinois, Indiana, Michigan, Minnesota, Ohio, Pennsylvania and Wisconsin. Submitted to **Environmental Health Perspectives**

Linnet, M., Henshel, D.S. Histological effects of TCDD on gonadal development in chicken hatchlings. Submitted to **Reproductive Toxicology**

Workman, A, Henshel, D.S., and Carpenter, D.C., Great Lakes States Health Statistics for Areas of Concern in the United States.

Dreyfuss-Wells, K, Butch, W., Backhus, D., Henshel, D.S. PCB contamination in Bloomington, Indiana: A case study of the factors affecting site remediation. Submitted to **Environmental Management**.

**Published Abstracts of Presentations at International and National Meetings
(not included in talks presented at institutions, seminars, workshops, above)**

Henshel, D., Wolfe, M., Basu, N., Aschner M., Bowerman, W., Echeverria, D., Gilbertson, M., Ralston, N., Rumbold, D. (2006). Recommendations for Future Research on Mercury Bioindicators for Human Health and Wildlife. Society for Environmental Toxicology and Chemistry 27th Annual Meeting, November 5 - 9, Montreal Quebec Canada.

Yeager, R.L., Lim, J., Millsap, D.S., Sanders, R.A., Watkins J.B. III, Whelan, H.T., Eells, J.T. and **Henshel, D.S.** (2006). Near infrared light therapy attenuates dioxin-induced embryo mortality. Midwest Regional Chapter of the Society of Toxicology. Lincolnshire, IL. (*Runner up – Victor A. Drill Award for the Best Graduate Student Presentation).

Oleske, DA, Lim J., Yeager R.L., Millsap D.S., Sanders R.A., Whelan H.T., Eells J.T., **Henshel D.S.**, and Watkins J.B. III. (2006). Near infrared light therapy attenuates TCDD-induced hepatotoxicity. Midwest Regional Chapter of the Society of Toxicology. Lincolnshire, IL.

Yeager, RL, Franzosa, J.A., Millsap, D.S., Lim, J., Eells, J.T., Whelan, H.T., and **Henshel, D.S.** (2006). NIR Light Therapy Attenuates Dioxin-induced Embryo Mortality. Society of Toxicology Annual Meeting, March, San Diego, CA **The Toxicologist** 85:

Henshel, D.S., Sparks, D.W., Heise S., Millsap, D., Yeager, R.L. and DeWitt, J.D. (2005). Site Specific PCB-Correlated Interspecies Differences in Organ Somatic Indices and Heart Deformities - Do tree swallows really represent other passerines? Society for Environmental Toxicology and Chemistry 26th Annual Meeting, November 13 - 17, Baltimore, MD.

Sparks, D.W., Simon, T.P., Tosick, M.J., Millsap, D. and **Henshel, D.S.** (2005). Creek chub (*Semotilus atromaculatus* Mitchill) Reproduction in PCB-contaminated streams in Indiana. Society for Environmental Toxicology and Chemistry 26th Annual Meeting, November 13 - 17, Baltimore, MD.

Yeager, RL, Franzosa, J.A., Millsap, D.S., Lim, J., Heise, S.S., Eells, J.T., Whelan, H.T., and **Henshel, D.S.** (2005). Chicken embryonic survivorship as a function of phototherapy-dioxin co-exposure. Ohio Valley Society for Environmental Toxicology and Chemistry 22nd Annual Meeting, June 2, Cincinnati, OH.

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DeWitt, J.C., **D.S. Henshel** (2001) Changes in the Brains of Domestic Hatchling Chickens Developmentally Exposed to TCDD. Ohio Valley SETAC Annual Meeting, May 10-11, Miami, OH

Wilkerson, E. and **Henshel, D.** (2001) Histological Abnormalities and Normalities in Snapping Turtles from a PCB-Contaminated Site. Society of Toxicology, 2001 Annual Meeting, San Francisco, CA, March 2001 Fund. Appl. Toxicol. (The Toxicologist) 35 (No.1 pt 2):

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DeWitt, J.C., Meyer, E.M., **Henshel, D.S.** (2000) TCDD-Induced Brain Asymmetry and Behavior: What do Individual Chicks Have to Say? Ohio Valley Society for Environmental Toxicology and Chemistry, May 10-11, Miami, Ohio (Awarded the Marian Vinegar Award for Best Student Presentation)

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Henshel, D.S. (1999) Developmental Toxicology Endpoints: A Case-Study from the Field." Wildlife Applications to Remediation Decision-Making, September 1999, Denver, CO

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