James M. Lazorchak, Aquatic Biologist, in EPA's National Exposure Research Laboratory

Systems Exposure Division
Mailing Address

lazorchak.jim@epa.gov

Area of Expertise: My research and expertise is in developing fish, invertebrate, and plant bioassessment and ecotoxicology methods to assess the biological integrity of lakes, streams, rivers, and estuaries. Other research activities include adapting genomic tools to bioassessments and ecotoxicity tests to assess ecosystem health and develop water quality criteria, water quality standards and NPDES permit applications that can be used for emerging contaminants (i.e., EDCs, pharmaceuticals, and bacteria/algal toxins). I am also working on ion and additive chemical toxicity issues associated with produced waters from resource extraction activities (oil, gas, coal, and minerals). I am initiating new research in the development and application of chemical, physical and biology methods for assessing algal toxins.

Select Publications:

Nietch, C. T., E. L. Quinlan, J. M. Lazorchak, C. A. Impellitteri, D. Raikow, AND D. Walters. Effects of a Chronic Lower Range of Triclosan Exposure on a Stream Mesocosm Community. ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY. Society of Environmental Toxicology and Chemistry, Pensacola, FL, 32(12):2874-2887, (2013).

LATTIER, D. L., J. M. LAZORCHAK, F. A. FULK, AND M. KOSTICH. A look backwards at environmental risk assessment: an approach to reconstructing ecological exposures. Chapter 1, Bryan W. Brooks (ed.), Human Pharmaceuticals in the Environment: Current and Future Perspectives. Emerging topics in Ecotoxicology. Springer, New York, NY, 4:109-137, (2012).

Haring, H. J., M. E. Smith, J. M. LAZORCHAK, P. CROCKER, A. EURESTI, K. A. BLOCKSOM, M. C. Wratschko, AND MICHAEL SCHAUB. An interlaboratory comparison of sediment elutriate preparation and toxicity test methods. ENVIRONMENTAL MONITORING AND ASSESSMENT. Springer, New York, NY, 184(12):7343-7351, (2012).

View research publications by James Lazorchak.

Education:

- Ph.D. in Ecotoxicology, 1986, M.S. in Environmental Sciences, 1978, University of Texas at Dallas
- M.S. in Aquatic Ecology, 1974, Wright State University
- B.S. in Biology, 1987, Southeast Missouri State University

Professional Experience:

- Research Aquatic Biologist and Aquatic Facilities Manager, USEPA, ORD/NERL/SED/EIB
- Research Aquatic Biologist and Aquatic Facilities Manager, USEPA, ORD/NERL/EERD/MIRB, 2009 to 2016
- Acting Chief, USEPA, ORD/NERL/EERD, MIRB, 2004 to 2009
- Acting Chief, USEPA, ORD/NERL/EERD, MERB, 2002 to 2004
- Research Aquatic Ecologist, USEPA, ORD/NERL/EERD, 1995 to 2002
- Chief, USEPA Bioassessment and Ecotoxicology Branch, 1988 to 1995
- Environmental Scientist, USEPA Region 8 Enforcement & Water Branches, 1985-1988
- Environmental Scientist, USEPA Region 6 Water Quality Branch, 1976-1985
- Environmental Scientist Ohio EPA, Southwest District Office, Surveillance Branch, 1974-1976

Honors and Awards:

- 2013 STAA Award Level 3. Effects from filtration, capping agents, and presence/absence of food on the toxicity of silver nanoparticles to *Daphnia magna*.
- 2012 Regional Science Award. For demonstrating initiative and creativity in support of the development and use of novel molecular biology methods to detect endocrine active chemicals in the environment.
- 2011. STAA Level I. Influence of Trophic Position and Spatial Location on Polychlorinated
- Biphenyl (PCB) Bioaccumulation in a Stream Food Web ES&T. (2) The Dark Side of Subsidies: Adult Stream Insects Export Organic Contaminants to Riparian Predators Eco App.
- 2011 STAA Level II. Risks to Aquatic Organisms Posed by Human Pharmaceutical Use STOTEN
- 2011 STAA Level II. Analysis of Ecologically Relevant Pharmaceuticals in Wastewater and
- Surface Water using Selective Solid-Phase Extraction and UPLC-MS/MS Anal Chem.
- 2011 STAA Level II. Altered Gene Expression in the Brain and Liver of Female Fathead
- Minnows Pimephales Promelas Rafinesque Exposed to Fadrozole J Fish Bio. (2) Altered Gene Expression in the Brain and Ovaries of Zebrafish (Danio rerio) Exposed to the Aromatase Inhibitor Fadrozole: Microarray Analysis and Hypothesis Generation ET&C (3) Influence of Ovarian Stage on Transcript Profiles in Fathead Minnow (Pimephales promelas) Ovary Tissue Aquatic Tox.
- 2010. Bronze Metal for successful planning and implementation of EMAP Great Rivers.
- 2010. STAA Award Level II. Establishing a World-Class Method Development Laboratory for Analyzing PFOS, PFOA, and Perfluorinated Compounds.
- 2010 STAA Award Level III. Applying Mechanistic Toxicology to Ecological Risk Assessment of EDCs.