

## W. Jack Jones, Microbiologist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

[Mailing Address](#)

[jones.jack@epa.gov](mailto:jones.jack@epa.gov)

**Area of Expertise:** Biotic and abiotic transformations of a chemical stressor following an exposure may lead to the formation of reactive metabolites that are toxic. In response to Program Office (OPP) needs and the goals of EPA's National Center for Computational Toxicology, my recent research efforts have focused on developing a capability to forecast the metabolism of xenobiotic chemicals that are of interest to EPA. Research has focused on compiling a xenobiotic chemical metabolism database from both peer-reviewed literature and from Program Office/registrant-submitted data; development of data management tools for ready data access and data evaluation; and development of an *in silico* simulator of xenobiotic metabolism.

The goal is to provide tools to predict metabolism of hazardous chemicals of concern to EPA Program Offices to order to aid chemical risk assessment and registration/re-registration decisions, as well as to prioritize chemical lists for testing and evaluation. Prior to beginning this effort, my research focus was on understanding kinetics of microbial transformation and the physicochemical factors that affect microbial transformation of persistent organic pollutants in natural ecosystems, to support the development of environmental fate models.

### Select Publications:

JARMAN, J. L., W. J. JONES, L. A. HOWELL, AND A. W. GARRISON. APPLICATION OF ELECTROPHORESIS TO STUDY THE ENANTIOSELECTIVE TRANSFORMATION OF FIVE CHIRAL PESTICIDES IN AEROBIC SOIL SLURRIES. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY. American Chemical Society, Washington, DC, 53(16):6175-6182, (2005).

Canganella, F., W. Jones, A. Gambacorta, AND G. Antranikian. BIOCHEMICAL AND PHYLOGENETIC CHARACTERIZATION OF TWO NOVEL DEEP-SEA THERMOCOCCUS ISOLATES WITH POTENTIALLY BIOTECHNOLOGICAL APPLICATIONS. Archives of Microbiology 167(4):233-238, (1997).

Pakdeesusuk, U., W. J. Jones, C. M. Lee, A. W. Garrison, W. L. O'Niell, D. L. Freedman, J. T. Coates, AND C. S. Wong. CHANGES IN ENANTIOMERIC FRACTIONS DURING MICROBIAL REDUCTIVE DECHLORINATION OF PCB132, PCB149, AND AROCLOR 1254 IN LAKE HARTWELL SEDIMENT MICROCOSMS. ENVIRONMENTAL SCIENCE & TECHNOLOGY 37(6):1100-1107, (2003).

View more research publications by [Jack Jones](#).

**Education:**

- Ph.D. Microbiology, Clemson University, 1981
- B.S. Microbiology, Clemson University, 1973

**Professional Experience:**

- Acting Branch Chief, Processes and Modeling Branch, USEPA, ORD, NERL, ERD-Athens, GA
- Bioremediation Research Team Leader, US EPA, ORD, NERL-ERD, Athens, GA 1995–2001
- Research Microbiologist, USEPA, ORD, NERL-ERD, Athens, GA 1991–present
- Associate Professor, School of Applied Biology, Georgia Institute of Technology 1988–1991
- Assistant Professor, School of Applied Biology, Georgia Institute of Technology 1984–1988
- Postdoctoral Research Associate, University of Illinois 1981-1984
- Graduate Assistant, Department of Microbiology, Clemson University, 1975 – 1984