

ROMAN P. LANNO



Professional Preparation

University of Guelph	Fisheries Biology	BS with Honours 1981
University of Guelph	Nutrition	MS 1984
University of Waterloo	Biology	PhD 1991

Appointments

2003-present: Associate Professor, Dept. of Entomology, OSU/OARDC, Columbus, OH
2001-2003: Assistant Professor, Dept. of Entomology, OSU/OARDC, Columbus, OH
2000-2001: Associate Professor & Director, Ecotoxicology and Water Quality Research Laboratory, Dept. of Zoology, Oklahoma State University, Stillwater, OK
1995-2000: Assistant Professor & Director, Ecotoxicology and Water Quality Research Laboratory, Dept. of Zoology, Oklahoma State University, Stillwater, OK
1993-1995: Research Associate & Adjunct Assistant Professor, Dept. of Biology, University of Waterloo, Waterloo, Ontario
1991-1993: NSERC Industrial Postdoctoral Research Fellow & Project Manager, Ecological Services for Planning Ltd., Guelph, Ontario
1987-1990: Graduate Research Assistant, Department of Biology, University of Waterloo, Waterloo, Ontario

Program capsules

Research: Applied and theoretical aspects of determining the bioavailability of chemicals in the environment, particularly in soils and aquatic systems; development of biomimetic techniques for assessing chemical bioavailability; environmental risk assessment.

Teaching: Courses in environmental risk assessment and ecotoxicology; introductory biology for non-majors

Three Most Important Scholarly Accomplishments, Last Five Years

- “Contaminated Soils – From Soil-Chemical Interactions to Ecosystem Management” – Edited by R. Lanno – book is the summary of a Society of Environmental Toxicology and Chemistry Pellston Workshop; co-authored workshop proposal and co-managed workshop.
- Application of solid-phase microextraction (SPME) technology as a biomimetic sampling device to model the bioaccumulation of hydrophobic organic chemicals in soil invertebrates.
- Demonstration of the validity in comparative ecotoxicology of the critical body residue concept for pentachlorophenol in aquatic, soil, and sediment systems.

Five Selected Publications (Total 71 – 28 refereed journal; 42 technical; 1 book)

Vijver, M.G., van Gestel, C.A.M., Lanno, R.P., van Straalen, N.M., Peijnenburg, W.J.G.M. 2004. Internal metal sequestration and its ecotoxicological relevance – a review. *Environ. Sci. Technol.* 38:4705-4712.

Lanno, R.P., Wells, J.B., Conder, J.M., Bradham, K., Basta, N.T. 2004. Approaches for determining the bioavailability of chemicals in soil for earthworms. *Ecotoxicol. Environ. Safety* 57:39-47.

- Lanno, R. [Editor] 2003. Contaminated soils: From soil-chemical interactions to ecosystem management. Proceedings of Workshop on Assessing Contaminated Soils, Pellston, MI, 23-27 September 1998. Society of Environmental Toxicology and Chemistry (SETAC), Pensacola, FL, USA. 427 p.
- Wells, J.B., and Lanno, R.P. 2001. Passive sampling devices (PSDs) as biological surrogates for estimating the bioavailability of organic chemicals in soil, In: Environmental Toxicology and Risk Assessment: Science, Policy, and Standardization - Implications for Environmental Decisions. ASTM STP 1403, B. Greenberg, R. Hull, M.H. Roberts, Jr., and R.W. Gensemer, Eds., ASTM, p. 253-270.
- Lanno, R.P. and L.S. McCarty. 1997. Earthworm bioassays: Adopting techniques from aquatic toxicity testing. Soil Biol. Biochem. 29:693-697.

Five Selected Grants

- Quantifying ecological risk from agricultural land treated with biosolids, Lanno, R., Basta, N., Arvai, J., OARDC Interdisciplinary Team Research Grant, \$99,648, 2004-2006.
- Determining the Bioavailability, Toxicity, and Bioaccumulation of Organic Chemicals and Metals for the Development of Ecological Soil Screening Levels, Lanno, R.P. (PI), Basta, N., Checkai, R., Kuperman, R., Strategic Environmental Research and Development Program (SERDP). \$1,203,614, 2001-2005.
- Passive sampling devices (PSDs) for bioavailability screening of soils containing petrochemicals, Lanno, R.P. and K.E. Duncan, Integrated Petroleum Energy Consortium, \$222,000, 1999.
- Integrated Soil Chemical and Toxicological Approach for the Development of Ecological Screening Levels of Heavy Metals in Soil, Lanno, R.P. and N.T. Basta, US EPA, ORD, National Centre for Environmental Assessment, \$161,000, 1998-2000.
- Passive sampling devices: An alternative method for bioavailability screening of organic contaminants in soil, Lanno, R.P., Gas Research Institute, \$194,000, 1998-2000.

Professional Service Highlights, Last 5 Years

- US EPA Metals Assessment Issue Paper Committee - Bioavailability of Metals, 2002-present
- Environmental Toxicology & Chemistry, Editorial Board Member - 2003-2005; 1998-2000
- Water Environment Research Foundation (WERF) – member of three Project Advisory Subcommittees, 2000-2005

Key Collaborations

- International collaboration with scientists from Vrije Universiteit, Amsterdam and RIVM, Bilthoven, The Netherlands – Development of a fractionation procedure for assessing the internal compartmentalization of metal in soil invertebrates
- Bioavailability of metals, PAHs, and energetic compounds in soil – collaboration with scientists at U.S. Army Aberdeen Proving Ground

Additional Synergistic Activities

- Taught short courses in "Nutritional considerations in toxicity testing" (1 time) and "Assessing the toxicity of contaminated soils" (5 times) at Society of Environmental Toxicology and Chemistry Annual meetings.