

Dan Villeneuve, Research Toxicologist in EPA's National Health and Environmental Effects Research Laboratory.

Mid-Continent Ecology Division
6201 Congdon Blvd
Duluth, MN, 55804

Villeneuve.dan@epa.gov

Area of Expertise: My research interest is focused on development and application of the adverse outcome pathway (AOP) framework to support use of alternative, mechanistically-based, data as a foundation for regulatory decision-making. I use systems biology approaches to understand the means through which chemicals interact with physiological pathways to cause reproductive and developmental toxicity in fish and other aquatic organisms.

Select Publications:

1. Villeneuve DL, Jensen KM, Cavallin JE, Durhan EJ, Garcia-Reyero N, Kahl MD, Leino RL, Makynen EA, Wehmas LC, Perkins EJ, Ankley GT. 2017. Effects of the antimicrobial contaminant triclocarban, and co-exposure with the androgen 17 β -trenbolone, on reproductive function and ovarian transcriptome of the fathead minnow (*Pimephales promelas*). Environ. Toxicol. Chem. 36: 231-242 (doi: 10.1002/etc.3531).
2. Schroeder AL, Ankley GT, Houck K, Villeneuve DL. 2015. Environmental surveillance and monitoring – the next frontiers for high throughput toxicology. Environ. Toxicol. Chem. 35: 512-525. Doi: 10.1002/etc.3309.
3. Nelson KR, Schroeder AL, Ankley GT, Blackwell BR, Blanksma C, Degitz SJ, Flynn KM, Jensen KM, Johnson RD, Kahl MD, Knapen D, Kosian PA, Milsik RY, Randolph EC, Saari T, Stinckens E, Vergauwen L, Villeneuve DL. 2015. Impaired anterior swim bladder inflation following exposure to the thyroid peroxidase inhibitor 2-mercaptobenzothiazole part I: fathead minnow. Aquat. Toxicol. 173: 192-203. (doi: 10.1016/j.aquatox.2015.12.024.).
4. Villeneuve DL, Crump D, Garcia-Reyero N, Hecker M, Hutchinson TH, LaLone CA, Landesmann B, Lettieri T, Munn S, Nepelska M, Ottinger MA, Vergauwen L, Whelan M. 2014. Adverse outcome pathway (AOP) development I: strategies and principles. Toxicol. Sci. 142(2) 312-320. (DOI: 10.1093/toxsci/kfu199).
5. Villeneuve DL, Crump D, Garcia-Reyero N, Hecker M, Hutchinson TH, LaLone CA, Landesmann B, Lettieri T, Munn S, Nepelska M, Ottinger MA, Vergauwen L, Whelan M. 2014. Adverse outcome pathway (AOP) development II: best practices. Toxicol. Sci. 142(2): 321-330. (DOI: 10.1093/toxsci/kfu200).
6. Villeneuve D, Volz DC, Embry MR, Ankley GT, Belanger SE, Léonard M, Schirmer K, Tanguay R, Truong L, Wehmas L. Investigating alternatives to the fish early life-stage test: a strategy for discovering and annotating adverse outcome pathways for early fish development. Environ. Toxicol. Chem. (in press; doi: 10.1002/etc.2403).

Education:

- B.S., University of Wisconsin-Stevens Point, Stevens Point, WI, Biology and Water Resources, 1995
- Ph.D., Michigan State University, East Lansing, MI, Zoology-Environmental Toxicology, 2000

Professional Experience:

- Project Lead in Chemical Safety for Sustainability, Adverse Outcome Pathway Discovery and Development
- Associate Editor, Environmental Toxicology and Chemistry
- Expert Advisor, Organization for Economic Cooperation and Development (OECD), Extended Advisory Group on Molecular Screening and Toxicogenomics (EAGMST)
- US National Academy of Sciences and Kavli Foundation Kavli Fellow, 2014
- US EPA Bronze Medal, 2011 and 2012
- US EPA Scientific and Technological Achievement Awards, 5 level II, 12 level III, 5 honorable mention, 2007-2015.