

## David C. Volz, PhD

**Current Title:** Associate Professor, Step II  
**Current Address:** University of California, Riverside  
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### EDUCATION

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**Duke University, Durham, NC USA**

Doctor of Philosophy in Environment 2003-2006  
Certificate in Toxicology (Integrated Toxicology and Environmental Health Program)

**University of South Carolina, Columbia, SC USA**

Master of Science in Public Health 1999-2001

**University of South Carolina, Columbia, SC USA**

Bachelor of Science in Marine Science 1996-1999

### SELECTED ACADEMIC AWARDS AND HONORS

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- Outstanding New Environmental Scientist (ONES) Award, NIH/NIEHS 2017
- Excellence in Review Award, *Environmental Science & Technology Letters* 2016
- Promising Investigator Research Award, UofSC Office of the Vice President for Research 2011
- Elsevier/SETAC Best Student Platform Presentation in Toxicogenomics 2005
- AAAS/Science Award for Excellence in Science 2005
- U.S. EPA STAR Graduate Fellowship 2004
- Best Student Poster Award, Superfund Basic Research Program Meeting 2004
- Pre-Doctoral Training Fellowship in Toxicology, Duke University 2003
- Outstanding Graduate Student Award, UofSC Arnold School of Public Health 2001

### PROFESSIONAL EXPERIENCE

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<i>Associate Professor</i>	University of California, Riverside, CA USA	2017-
<i>Assistant Professor</i>	University of California, Riverside, CA USA	2015-2017
<i>Assistant Professor</i>	University of South Carolina, Columbia, SC USA	2009-2015
<i>Toxicologist</i>	Syngenta, Product Safety/R&D, Greensboro, NC USA	2006-2009
<i>Part-Time Consultant</i>	EcoStat, Mebane, NC USA	2005-2006
<i>Research Scientist</i>	National Oceanic & Atmospheric Administration, Charleston, SC University of South Carolina, Columbia, SC USA (joint appointment)	2001-2003

### ADMINISTRATIVE EXPERIENCE

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<i>Grad. Advisor, ESGP</i>	University of California, Riverside, CA USA	2017-
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## TEACHING EXPERIENCE

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<b>University of California, Riverside, CA USA</b>	2016-
<i>NASC 093 – CNAS Freshman Advising Seminar (undergraduate) (Fall 2016)</i>	
<i>ENSC/ENTX 103 – Environmental Pollution &amp; Health (undergraduate) (Spring 2016, 2017)</i>	
<i>ENSC/ENTX 200 – Fate &amp; Transport of Chemicals in the Environment (graduate) (Winter 2016)</i>	
<i>ENSC/ENTX 203 – Human &amp; Ecological Risk Assessment (graduate) (Fall 2016)</i>	
<b>University of South Carolina, Columbia, SC USA</b>	2009-2015
<i>ENHS/ENVR 221 – Environmental Pollution &amp; Health (undergraduate) (Spring 2014)</i>	
<i>ENHS/ENVR 321 – Environmental Pollution &amp; Health (undergraduate) (Fall 2014)</i>	
<i>ENHS 761 – Ecotoxicology of Aquatic Systems (graduate) (Spring 2010, 2011, 2012)</i>	
<i>ENHS 772 – Human &amp; Ecological Risk Assessment (graduate) (Fall 2011, 2012, 2013; Spring 2013, 2015)</i>	
<i>ENHS 793 – Topic: Human &amp; Ecological Risk Assessment (graduate) (Fall 2010)</i>	
<i>ENHS 793 – Topic: Environmental Health Sciences Seminar (graduate) (Fall 2013; Spring 2014)</i>	

## PROFESSIONAL SOCIETIES AND SERVICE

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### Professional Society Affiliations

<i>Regular Member, Teratology Society</i>	2016-
<i>Full Member, Society of Toxicology (SOT)</i>	2009-
<i>Member, Society of Environmental Toxicology and Chemistry (SETAC)</i>	2000-

### Professional Society Service

<i>Member, Carolinas SETAC Board of Directors</i>	2010-2012
<i>Member, SETAC North America Technical Committee</i>	2007-2009

### Community Service

<i>Member, Systematic Evaluation of the Application of Zebrafish in Toxicology, NIEHS/NTP</i>	2015-
<i>Member, ILSI/HESI Steering Team, Animal Alternatives for Environ. Risk Assessment</i>	2011-2014
<i>Member, ILSI/HESI Subcommittee, Animal Alternatives for Environ. Risk Assessment</i>	2009-2014
<i>Member, IUPAC Task Group, Global Framework for Ecological Risk Assessment</i>	2011-2013

### Other Professional Service

<i>Workshop Instructor, IUPAC Workshop on Ecological Risk Assessment (Bogotá, Colombia)</i>	2013
<i>Workshop Instructor, IUPAC Workshop on Ecological Risk Assessment (Beijing, China)</i>	2012
<i>Workshop Chair, ILSI/HESI Workshop on Predictive Ecotoxicology (Minnesota, USA)</i>	2012
<i>Workshop Participant, ILSI/HESI Workshop on Predictive Ecotoxicology (Paris, France)</i>	2010
<i>Workshop Participant, SETAC Pellston Workshop on Predictive Ecotoxicology (Oregon, USA)</i>	2009
<i>Workshop Participant, NERC International Workshop on Toxicogenomics (Vancouver, CAN)</i>	2008

### Session Chair and Moderator at National Scientific Meetings

<i>SETAC North America 35<sup>th</sup> Annual Meeting, Vancouver, BC Canada</i>	2014
<ul style="list-style-type: none"><li><i>“Alternative Methods for Evaluating Aquatic Toxicity: New Methods, Endpoints, and Testing Strategies”</i></li></ul>	
<i>SOT 50<sup>th</sup> Annual Meeting, Washington, DC, USA</i>	2011
<ul style="list-style-type: none"><li><i>“Advancing Predictive Ecotoxicology Testing and Environmental Risk Assessment in the 21st Century”</i></li></ul>	

- SETAC North America 30<sup>th</sup> Annual Meeting, New Orleans, LA USA 2009
- “Molecular and Genetic Approaches to Environmental Toxicology”
- SETAC North America 29<sup>th</sup> Annual Meeting, Tampa, FL USA 2008
- “Aquatic Risk Assessment of Herbicides”
  - “Molecular and Genetic Approaches to Environmental Toxicology”
- SETAC North America 28<sup>th</sup> Annual Meeting, Milwaukee, WI USA 2007
- “Ecotoxicogenomics: Standardization and Utility for Future ERAs”
  - “Modern Biological Approaches to Environmental Toxicology”
- SETAC North America 27<sup>th</sup> Annual Meeting, Montreal, QC Canada 2006
- “Modern Biological Approaches to Medaka/Zebrafish Toxicology”

**Manuscript Review for Scientific Journals** 2006-

*Aquatic Toxicology; Bulletin of Environmental Contamination and Toxicology; Chemical Research in Toxicology; Chemosphere; Comparative Biochemistry and Physiology-Part C; Drug and Chemical Toxicology; Ecotoxicology; Ecotoxicology and Environmental Safety; Environment International; Environments; Environmental Health Perspectives; Environmental Pollution; Environmental Research; Environmental Science: Nano; Environmental Toxicology; Environmental Toxicology and Chemistry; Environmental Science and Technology; Environmental Science and Technology Letters; Fish Physiology and Biochemistry; Food and Chemical Toxicology; Integrated Environmental Assessment and Management; International Journal of Environmental Analytical Chemistry; International Journal of Molecular Sciences; Journal of Environmental Monitoring; Journal of Environmental Sciences; Journal of Environmental Science and Health; Journal of Visualized Experiments (JoVE); NANOIMPACT; Nanotoxicology; Nature Reviews Drug Discovery; Neurotoxicology; Neurotoxicology and Teratology; Nicotine & Tobacco Research; PeerJ; Pharmacology, Biochemistry and Behavior; PLOS Genetics; PLOS ONE; Reproductive Toxicology; Scientific Reports; Toxicology and Applied Pharmacology; Toxicology Reports; Toxicological Sciences; Zebrafish*

**Editorial Boards**

- Associate Editor, Editorial Board of Chemosphere* 2014-
- Member, Editorial Advisory Board of Environmental Science & Technology Letters* 2015-
- Member, Editorial Advisory Board of Neurotoxicology and Teratology* 2014-
- Member, Editorial Advisory Board of Environmental Toxicology and Chemistry* 2014-

**Federal Grant Application Reviews (*ad hoc* review)** 2010-

- National Institutes of Health (USA) – Systemic Injury by Environmental Exposure (2016, 2017)
- National Institutes of Health (USA) – ZES1 RAM-S (L) 1, NIH Loan Repayment (2017)
- National Institutes of Health (USA) – ZES1 RAM-D (NT) 1, National Toxicology Program Studies (2017)
- National Institutes of Health (USA) – ZES1 LWJ-K (S2) 1, Superfund (P42) Research Program (2016)
- Department of Defense (USA), SERDP (2015)
- National Institutes of Health (USA) – ZRG1 DKUS C 50 (2015)
- National Institutes of Health (USA) – ZRG1 DKUS E 55 (2015)
- National Institutes of Health (USA) – ZRG1 DKUS C 55 (2014)
- National Institutes of Health (USA) – ZRG1 DKUS C 90 (2014)
- National Science Foundation (USA) (2010, 2012, 2013)
- National Research Agency (France) (2013)

## RESEARCH SUPERVISION

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### Primary Supervision of Post-Doctoral Fellows

Subham Dasgupta, PhD, Dept. of Environmental Sciences, UCR (2017-Present)  
Allison Kupsco, PhD, Dept. of Environmental Sciences, UCR (2016-2017)  
Jessica Leet, PhD, Dept. of Environmental Health Sciences, UofSC (2013-2015)

### Primary Supervision of Doctoral Students

Connie Mitchell, PhD Student, Environmental Toxicology Graduate Program, UCR (2016-Present)  
Sara Vliet, PhD Student, Environmental Toxicology Graduate Program, UCR (2015-Present)  
Tara Raftery, PhD, Dept. of Environmental Health Sciences, UofSC (Graduated May 2015)  
Krystle Yozzo, PhD, Dept. of Environmental Health Sciences, UofSC (Graduated Dec. 2013)  
Sean McGee, PhD, Dept. of Environmental Health Sciences, UofSC (Graduated Dec. 2012)  
Sumith Jayasinghe, PhD, Dept. of Environmental Health Sciences, UofSC (Graduated May 2012)

### Supervision of PhD Student Rotation Projects

Jin Chen, PhD Student, Environmental Toxicology Graduate Program, UCR (July 2016-Dec. 2016)  
David Lee, PhD Student, Environmental Toxicology Graduate Program, UCR (Sept. 2015-March 2016)

### Supervision of Visiting Student Research

Evelyn Stinckens, PhD Student, University of Antwerp, Belgium (July 2016)

### Supervision of Undergraduate Student Research

Rohan Kamath, Major: Cell, Molecular, and Developmental Biology, UCR (June 2017-Present)  
Merett Saad, Major: Biochemistry, UCR (March 2017-Present)  
Christine Nguyen, Major: Environmental Sciences, UCR (Sept. 2016-Present)  
Trina Ho, Major: Biology, UCR (Jan. 2016-Present)  
Sherissa Villamor, Major: Cell, Molecular, and Developmental Biology, UCR (Jan. 2016-June 2016)  
Rachel Hipszer, Major: Marine Science, UofSC (June 2014-April 2015)  
Gregory Isales, Major: Marine Science, Honors College, UofSC (Feb. 2013-Dec. 2014)  
Luke Bassett, Major: Marine Science, Honors College, UofSC (Aug. 2013-April 2014)  
Casey Lindberg, Major: Marine Science, Honors College, UofSC (Aug. 2013-April 2014)  
William Johansen, Major: Environmental Science, UofSC (Jan. 2011-Aug. 2011)

## COMPETITIVE RESEARCH SUPPORT

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### Active Research Support

R01ES027576 (PI: Volz; Co-I: Stapleton) 3/1/2017 – 2/28/2022  
NIH/NIEHS Total Amount: \$1,906,795  
*Developmental Toxicity of Organophosphate-Based Flame Retardants*

### Completed Research Support

R21ES022797 (PI: Volz; Co-I: Stapleton) 5/9/2014 – 4/30/2017  
NIH/NIEHS Total Amount: \$408,352  
*Developmental Toxicity of Organophosphate-Based Flame Retardants*

R835169 (PI: Volz) 6/01/2012 – 5/31/2015  
US EPA/NCER Total Amount: \$1,063,460

*Imaging Assessment of G-Protein-Coupled Estrogen Receptor Activation*

11510-14-34470 (PI: Volz; Co-I: Isales) 1/1/2014 – 12/31/2014  
USC Office of Undergraduate Research Total Amount: \$2,500  
*Mechanisms of Triphenyl Phosphate (TPP)-Induced Cardiac Looping Impairments*

13010-13-32471 (PI: Davis; Co-I: Volz) 5/16/2013 – 9/14/2014  
USC Office of Research Total Amount: \$14,707  
*Generating Novel Zebrafish Lines to Study Pituitary Organogenesis*

11510-11-26377 (PI: Volz) 4/15/2011 – 7/15/2012  
USC Office of Research Total Amount: \$19,924  
*Developmental Neurotoxicity of an Alternative Flame Retardant (Firemaster 550) Widely Detected Within Indoor Environments*

FP916422 (PI: Volz) 1/1/2004 – 12/31/2006  
U.S. EPA/NCER (Graduate Fellowship) Total Amount: \$111,172  
*Molecular Biomarkers of Chemically-Mediated Hepatocarcinogenesis in Laboratory-Reared and Wild Teleost Populations*

**PEER-REVIEWED PUBLICATIONS (\*senior author; students advised are underlined)**

1. Vliet SM, Ho TC, **Volz DC\***. 2017. Behavioral screening of the LOPAC<sup>1280</sup> library in zebrafish embryos. *Toxicol. Appl. Pharmacol.* 329:241-248.
2. Mehinto AC, VanDervort DR, Lao W, He G, Denison MS, Vliet SM, **Volz DC**, Mazor RD, Maruya KA. 2017. High-throughput *in vitro* and *in vivo* screening of inland waters in Southern California. *Environ. Sci. Process Impacts* doi:10.1039/c7em00170c.
3. Diamante G, do Amaral E Silva Muller G, Menjivar-Cervantes N, Xu EG, **Volz DC**, Dias Bairy AC, Schlenk D. 2017. Developmental toxicity of hydroxylated chrysene metabolites in zebrafish embryos. *Aquat. Toxicol.* 189:77-86.
4. Diamante G, Menjivar-Cervantes N, Leung MS, **Volz DC**, Schlenk D. 2017. Contribution of G protein-coupled estrogen receptor 1 (GPER) to 17 $\beta$ -estradiol-induced developmental toxicity in zebrafish. *Aquat. Toxicol.* 186:180-187.
5. **Volz DC\***, Leet JK, Chen A, Stapleton HM, Katiyar N, Kaundal R, Yu Y, Wang Y. 2016. Tris(1,3-dichloro-2-propyl) phosphate induces genome-wide hypomethylation within early zebrafish embryos. *Environ. Sci. Technol.* 50(18):10255-10263.
6. Leet JK, Hipszer RA, **Volz DC\***. 2015. Butafenacil: A positive control for identifying anemia- and variegate porphyria-inducing chemicals. *Toxicol. Rep.* 2:976-983.
7. **Volz DC\***, Hipszer RA, Leet JK, Raftery TD. 2015. Leveraging embryonic zebrafish to prioritize ToxCast testing. *Environ. Sci. Technol. Lett.* 2:171-176.
8. Raftery TD and **Volz DC\***. 2015. Abamectin induces rapid and reversible hypoactivity within early zebrafish embryos. *Neurotoxicol. Teratol.* 49:10-18.
9. Isales GM, Hipszer RA, Raftery TD, Chen A, Stapleton HM, **Volz DC\***. 2015. Triphenyl phosphate-induced developmental toxicity in zebrafish: Potential role of the retinoic acid receptor. *Aquat. Toxicol.* 161:221-230.
10. Leet JK, Lindberg CD, Bassett LA, Isales GM, Yozzo KL, Raftery TD, **Volz DC\***. 2014. High-content screening in zebrafish embryos identifies butafenacil as a potent inducer of anemia. *PLOS ONE* 9(8): e104190.

11. Gerlach CV, Das SR, **Volz DC**, Bisson WH, Kolluri SK, Tanguay RL. 2014. Mono-substituted isopropylated triaryl phosphate, a major component of Firemaster 550, is an AHR agonist that exhibits AHR-independent cardiotoxicity in zebrafish. *Aquat. Toxicol.* 154:71-79.
12. Raftery TD, Isales GM, Yozzo KL, **Volz DC\***. 2014. High-content screening assay for identification of chemicals impacting spontaneous activity in zebrafish embryos. *Environ. Sci. Technol.* 48(1):804-810.
13. Villeneuve D, **Volz DC**, Embry MR, Ankley GT, Belanger SE, Léonard M, Schirmer K, Tanguay R, Truong L, Wehmas L. 2014. 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.* 33(1):158-169.
14. Leet JK, **Volz DC\***. 2013. Improving waste management strategies for small livestock farms. *Environ. Sci. Technol.* 47(21):11940-11941.
15. Yozzo KL, Isales GM, Raftery TD, **Volz DC\***. 2013. High-content screening assay for identification of chemicals impacting cardiovascular function in zebrafish embryos. *Environ. Sci. Technol.* 47(19):11302-11310.
16. **Volz DC\***, Elliott KC. 2013. Redefining risk boundaries in a shifting global chemical market. *Environ. Sci. Technol.* 47(12):6069-6070.
17. McGee SP, Konstantinov A, Stapleton HM, **Volz DC\***. 2013. Aryl phosphate esters within a major PentaBDE replacement product induce cardiotoxicity in developing zebrafish embryos: Potential role of the aryl hydrocarbon receptor. *Toxicol. Sci.* 133(1):144-156.
18. Yozzo KL, McGee SP, **Volz DC\***. 2013. Adverse outcome pathways during zebrafish embryogenesis: A case study with paraoxon. *Aquat. Toxicol.* 126:346-354.
19. McGee SP, Cooper EM, Stapleton HM, **Volz DC\***. 2012. Early zebrafish embryogenesis is susceptible to developmental TDCPP exposure. *Environ. Health Perspect.* 120(11):1585-1591.
20. **Volz DC\***, Elliott KC. 2012. Mitigating conflicts of interest in chemical safety testing. *Environ. Sci. Technol.* 46(15):7937-7938.
21. Corvi M, Stanley KA, Peterson TS, Kent ML, Feist SW, La Du JK, **Volz DC**, Hosmer AJ, Tanguay RL. 2012. Investigating the impact of chronic atrazine exposure on sexual development in zebrafish. *Birth Defects Res B Dev. Reprod. Toxicol.* 95(4):276-288.
22. Elliott KC, **Volz DC**. 2012. Addressing conflicts of interest in nanotechnology oversight: lessons learned from drug and pesticide safety testing. *J. Nanopart. Res.* 14(1):1-5.
23. Jayasinghe BS, **Volz DC\***. 2012. Aberrant ligand-induced activation of G-protein-coupled estrogen receptor 1 (GPER) results in developmental malformations during vertebrate embryogenesis. *Toxicol. Sci.* 125(1):262-273.
24. **Volz DC\***, Belanger S, Embry M, Padilla S, Sanderson H, Schirmer K, Scholz S, Villeneuve D. 2011. Adverse outcome pathways during early fish development: A conceptual framework for identification of chemical screening and prioritization strategies. *Toxicol. Sci.* 123(2):349-358.
25. Nichols JW, Breen M, Denver RJ, DiStefano JJ 3<sup>rd</sup>, Edwards JS, Hoke RA, **Volz DC**, Zhang X. 2011. Predicting chemical impacts on vertebrate endocrine systems. *Environ. Toxicol. Chem.* 30(1):39-51.
26. Van Aggelen G, Ankley GT, Baldwin WS, Bearden DW, Benson WH, Chipman JK, Collette TW, Craft JA, Denslow ND, Embry MR, Falciani F, George SG, Helbing CC, Hoekstra PF, Iguchi T, Kagami Y, Katsiadaki I, Kille P, Liu L, Lord PG, McIntyre T, O'Neill A, Osachoff H, Perkins EJ, Santos EM, Skirrow RC, Snape JR, Tyler CR, Versteeg D, Viant MR, **Volz DC**, Williams TD, Yu L. 2010. Integrating Omic Technologies into Aquatic Ecological Risk Assessment and

- Environmental Monitoring: Hurdles, Achievements and Future Outlook. *Environ. Health Perspect.* 118(1): 1-5.
27. Carney MW, Erwin K, Hardman RC, Yuen B, **Volz DC**, Hinton DE, Kullman SW. 2008. Differential toxicity of naphthoic acid isomers in medaka (*Oryzias latipes*) embryos: a mechanistic study. *Mar. Poll. Bull.* 57:255-266.
  28. **Volz DC**, Kullman SW, Howarth DL, Hardman RC, Hinton DE. 2008. Protective response of the Ah receptor to ANIT-induced biliary epithelial cell toxicity in see-through medaka. *Toxicol. Sci.* 102(2):262-277.
  29. Hardman RC, **Volz DC**, Kullman SW, Hinton DE. 2007. An in vivo look at vertebrate liver architecture: Three-dimensional reconstructions from medaka (*Oryzias latipes*). *Anat. Rec.* 290:770-782.
  30. **Volz DC**, Hinton DE, Law JM, Kullman SW. 2006. Dynamic gene expression changes precede dioxin-induced liver pathogenesis in medaka fish. *Toxicol. Sci.* 89(2):524-534.
  31. Hinton DE, Kullman SW, Hardman RC, **Volz DC**, Chen P-J, Carney M, Bencic DC. 2005. Resolving mechanisms of toxicity while pursuing ecotoxicological relevance?. *Mar. Poll. Bull.* 51:635-648.
  32. **Volz DC**, Bencic DC, Hinton DE, Law JM, Kullman SW. 2005. 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) induces organ-specific differential gene expression in Japanese medaka (*Oryzias latipes*). *Toxicol. Sci.* 85(1):572-584.
  33. Meyer JN, **Volz DC**, Freedman JH, Di Giulio RT. 2005. Differential display of hepatic mRNA from killifish (*Fundulus heteroclitus*) inhabiting a Superfund estuary. *Aquat. Toxicol.* 73(4):327-341.
  34. Cary TL, Chandler GT, **Volz DC**, Walse SS, Ferry JL. 2004. Phenylpyrazole insecticide fipronil induces male infertility in the estuarine meiobenthic crustacean *Amphiascus tenuiremis*. *Environ. Sci. Technol.* 38(2):522-528.
  35. Chandler GT, Cary TL, **Volz DC**, Walse SS, Klosterhaus SL. 2004. Fipronil effects on copepod development, fertility, and reproduction: A rapid life-cycle assay in 96-well microplate format. *Environ. Toxicol. Chem.* 23(1):117-124.
  36. Chandler GT, **Volz DC**. 2004. Semi-quantitative confocal laser scanning microscopy applied to marine invertebrate ecotoxicology. *Mar. Biotechnol.* 6(2):128-137.
  37. **Volz DC**, Chandler GT. 2004. An enzyme-linked immunosorbent assay for lipovitellin quantification in sediment-dwelling copepods: A screening tool for endocrine toxicity. *Environ. Toxicol. Chem.* 23(2):298-305.
  38. **Volz DC**, Wirth EF, Fulton MH, Scott GI, Strozier E, Block DS, Ferry JL, Walse SS, Chandler GT. 2003. Effects of fipronil and chlorpyrifos on endocrine-related endpoints in female grass shrimp (*Palaemonetes pugio*). *Bull. Environ. Contam. Toxicol.* 71(3):497-503.
  39. **Volz DC**, Wirth EF, Fulton MH, Scott GI, Block DS, Chandler GT. 2003. Endocrine-mediated effects of UV-A irradiation on grass shrimp (*Palaemonetes pugio*) reproduction. *Comp. Biochem. Physiol. C-Toxicol. Pharmacol.* 133(3):419-434.
  40. **Volz DC**, Kawaguchi T, Chandler GT. 2002. Purification and characterization of the common yolk protein, vitellin, from the estuarine amphipod *Leptocheirus plumulosus*. *Prep. Biochem. Biotechnol.* 32(2):103-116.

## BOOK CHAPTERS

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1. Solomon KR, Dalhoff K, **Volz DC**, Van der Kraak G. 2013. Effects of herbicides on fish. In: *Fish Physiology, Vol. 33 – Organic Chemical Toxicology of Fishes*. (Tierney KB, Farrell AP, Brauner CJ, Eds.), pp. 369-409. Elsevier Inc., London, UK.

## SCIENTIFIC PRESENTATIONS

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### Invited Seminars

1. University of California, Riverside, CA USA, 6/2/2017. Seminar Title: *Industry to Academia: A Perspective From 10 Years Out*
2. School of Health Sciences, Purdue University, West Lafayette, IN USA, 3/28/2017. Seminar Title: *Leveraging Zebrafish to Unravel Mechanisms of Organophosphate Flame Retardant-Induced Developmental Toxicity*
3. Dept. of Pediatric Medicine, University of California, San Diego, CA USA, 3/23/2017. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
4. Dept. of Pesticide Regulation, California EPA, Sacramento, CA USA, 1/20/2017. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
5. NIEHS T32 Seminar Series, University of California, Davis, CA USA, 1/19/2017. Seminar Title: *Leveraging Zebrafish to Unravel Mechanisms of Organophosphate Flame Retardant-Induced Developmental Toxicity*
6. Integrated Toxicology and Environmental Health Program, Duke University, Durham, NC USA, 9/30/2016. Seminar Title: *Industry to Academia: A Perspective From 10 Years Out*
7. University of California, Riverside, CA USA. 3/30/2016. Seminar Title: *Zebrafish as a Model for Environmental Epigenetics: A Case Study with TDCPP*
8. Southern California Coastal Water Research Project, Costa Mesa, CA USA, 12/11/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
9. Water SENSE IGERT Program, University of California, Riverside, CA USA, 11/10/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
10. Molecular Devices User Meeting, Del Mar, CA USA, 9/24/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
11. Mid-Continent Ecology Division, US Environmental Protection Agency, Duluth, MN USA, 3/11/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
12. Environmental Toxicology Graduate Program, University of California, Riverside, CA USA, 2/9/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
13. HESI Animal Alternatives Subcommittee (webinar), Washington, DC USA, 1/28/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
14. Engineer Research and Development Center, US Army Corps of Engineers, Vicksburg, MS USA, 1/6/2015. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
15. Department of Biology, Western Carolina University, Cullowhee, NC USA, 10/24/2014. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
16. HESI Genomics Committee Meeting, Washington, DC USA, 10/10/2014. Seminar Title: *Zebrafish as a Model for Environmental Epigenetics: A Case Study with TDCPP*
17. NIEHS/NTP, Research Triangle Park, NC USA, 7/22/2014. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
18. NIEHS/NTP Aquatic Models Workshop, North Carolina State University, Raleigh, NC USA, 5/5/2014. Seminar Title: *High-Content Screening Assay for Identification of Chemicals Impacting Cardiovascular Function in Zebrafish Embryos*
19. Fort Johnson Marine Science Seminar Series, Charleston, SC USA, 4/18/2014. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*
20. School of Pharmacy, Presbyterian College, Clinton, SC USA, 3/31/2014. Seminar Title: *High-Content Screening of Chemical Toxicity in Zebrafish Embryos*



21. Department of Natural Science, University of South Carolina-Beaufort, Bluffton, SC USA, 3/7/2014. Seminar Title: *High-Content Screening Assays for Identification of Chemicals Impacting Cardiovascular and Early Nervous System Development*
22. Marine Science Program, University of South Carolina, Columbia, SC USA, 1/31/2014. Seminar Title: *High-Content Screening Assays for Identification of Chemicals Impacting Cardiovascular and Early Nervous System Development*
23. California Environmental Protection Agency (Cal/EPA), Sacramento, CA USA, 9/9/2013. Seminar Title: *Alternatives to the Fish Early Life- Stage Test: A Strategy for Discovering and Annotating Adverse Outcome Pathways for Early Fish Development*
24. Dept. of Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, Columbia, SC USA, 8/28/2013. Seminar Title: *Developmental Toxicity of Organophosphate-Based Flame Retardants*
25. Center for Bioethics, Dept. of Philosophy, University of South Carolina, Columbia, SC USA, 3/20/2013. Seminar Title: *The Atrazine Story: A Perspective from the Front Lines of Controversy*
26. Integrated Toxicology and Environmental Health Program, Duke University, Durham, NC USA, 3/1/2013. Seminar Title: *Early Zebrafish Embryogenesis is Susceptible to Developmental TDCPP Exposure*
27. Dept. of Biological Sciences/Environmental Toxicology Program (ENTOX), Clemson University, Clemson, SC USA, 2/12/2013. Seminar Title: *Developmental Toxicity of Organophosphate-Based Flame Retardants*
28. Dept. of Soil and Water Sciences, China Agricultural University, Beijing, China, 9/19/2012. Seminar Title: *The Tricky Business of Ecological Risk Analysis*
29. Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL USA, 10/20/2011. Seminar Title: *G Protein-Coupled Estrogen Receptor (GPER): A Target for Xenoestrogens During Vertebrate Embryogenesis*
30. Integrated Toxicology and Environmental Health Program, Duke University, Durham, NC USA, 9/30/2011. Seminar Title: *Aberrant Ligand-Induced Activation of GPER Results in Developmental Malformations During Vertebrate Embryogenesis*
31. School of Medicine, University of South Carolina, Columbia, SC USA, 4/18/2011. Seminar Title: *Zebrafish Models of Environmental Disease*
32. Dept. of Biology and Geology, University of South Carolina, Aiken, SC USA, 3/4/2011. Seminar Title: *Zebrafish Models of Environmental Disease*
33. Dept. of Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, Columbia, SC USA, 2/2/2011. Seminar Title: *The Atrazine Story: An Analysis from the Front Lines of Controversy*
34. Dept. of Civil and Environmental Engineering, University of South Carolina, Columbia, SC USA, 2/5/2010. Seminar Title: *Small Fish Models for Predictive Toxicology*
35. Dept. of Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, Columbia, SC USA, 9/4/2009. Seminar Title: *Small Fish Models of Chemically-Induced Human Diseases*
36. NERC International Workshop on Fish Toxicogenomics. Environment Canada, North Vancouver, BC Canada, 4/21/2008; Seminar Title: *Predictive (Eco)Toxicogenomics: Acute vs. Adaptive Responses in Fish Following Chemical Exposure*
37. Dept. of Environmental and Molecular Toxicology, North Carolina State University, Raleigh, NC USA, 11/20/2007; Seminar Title: *Modeling Potential Atrazine-Induced Changes in Midwestern Stream Ecosystems*

38. Dept. of Biology, Appalachian State University, Boone, NC USA, 9/26/2007; Seminar Title: *Toxicogenomics: A Powerful Platform for Identifying Estrogen-Mimicking Chemicals*
39. Carolinas SETAC Meeting, Athens, GA USA, 4/11/2007; Seminar Title: *Toxicogenomics: A Powerful Platform for Identifying Estrogen- and Androgen-Mimicking Chemicals*

#### Guest Lectures

1. ENTX 101, Dept. of Environmental Sciences, University of California, Riverside, CA USA, 2/6/2017. Lecture Title: *Developmental Toxicology*
2. ENSC 208, Dept. of Environmental Sciences, University of California, Riverside, CA USA, 2/17/2016. Lecture Title: *Atrazine Ecological Watershed Monitoring Program*
3. ENTX 101, Dept. of Environmental Sciences, University of California, Riverside, CA USA, 2/5/2016. Lecture Title: *Developmental Toxicology*
4. ENSC 208, Dept. of Environmental Sciences, University of California, Riverside, CA USA, 2/5/2016. Lecture Title: *Alternatives to the Fish Early Life- Stage Test: A Research Strategy for Discovering and Annotating Adverse Outcome Pathways for Early Fish Development*
5. ENVR 202, School of the Environment, University of South Carolina, Columbia, SC USA, 1/27/2011. Lecture Title: *The Atrazine Story: An Analysis from the Front Lines of Controversy*

#### Invited Conference Presentations (students advised are underlined)

1. **Volz DC**. 2016. High-content screening of chemical toxicity in zebrafish embryos. 4<sup>th</sup> Symposium on Fish and Amphibian Embryos as Alternative Models in Toxicology and Teratology, Paris, France. (platform)
2. **Volz DC**, Vliet S, Raftery T. 2016. High-content screening of developmental neurotoxicity in zebrafish embryos. 56<sup>th</sup> Annual Meeting of the Teratology Society, San Antonio, TX, USA. (platform)
3. **Volz DC**, Elliott KC. 2012. Mitigating conflicts of interest in chemical safety testing: A proposal for enhancing public trust while sustaining productivity and profitability. 4<sup>th</sup> International Symposium on Pesticide and Environmental Safety, Beijing, China. (platform)
4. **Volz DC**, Belanger S, Embry M, Padilla S, Sanderson H, Schirmer K, Scholz S, Villeneuve D. 2011. Adverse outcome pathways during early fish development: A conceptual framework for identification of chemical screening and prioritization strategies. 32nd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Boston, MA, USA. (platform)

#### Conference Presentations (students advised are underlined)

1. Bertotto LB, Mengivar-Cervantes N, Price D, Richards J, Sapozhnikova Y, Gan J, **Volz DC**, Schlenk D. 2017. Effects of bifenthrin on estrogenic and dopaminergic pathways in embryos and juveniles of zebrafish (*Danio rerio*). 19<sup>th</sup> International Symposium on Pollutant Responses in Marine Organisms (PRIMO), Matsuyama, Japan. (platform)
2. Giroux M, Luu D, Vliet SM, **Volz DC**, Schlenk D. 2017. Effects of temperature and bifenthrin on the endocrinology of juvenile Chinook salmon (*Oncorhynchus tshawytscha*). 19<sup>th</sup> International Symposium on Pollutant Responses in Marine Organisms (PRIMO), Matsuyama, Japan. (platform)
3. Diamante G, do Amaral e Silva Muller G, Menjivar-Cervantes N, **Volz DC**, Bainy A, Schlenk D. 2017. Developmental toxicity of 2- and 6-hydroxychrysene on zebrafish embryos. 19<sup>th</sup> International Symposium on Pollutant Responses in Marine Organisms (PRIMO), Matsuyama, Japan. (platform)

4. Vliet SM, Ho TC, **Volz DC**. 2017. Behavioral screening of the LOPAC<sup>1280</sup> library reveals that zebrafish embryos are unable to discriminate modes of action for neuroactive compounds. 57<sup>th</sup> Annual Meeting of the Teratology Society, Denver, CO, USA. (poster)
5. Stinckens E, Vergauwen L, Cavallin JE, Blackwell BR, Witters H, Blust R, Ankley GT, **Volz DC**, Villeneuve DL, Knapen D. 2017. Development of an alternative testing strategy for the FELS test using the AOP network “thyroperoxidase and/or deiodinase inhibition leading to impaired swim bladder inflation”. 26th Annual Meeting of the Society of Environmental Toxicology and Chemistry – Europe, Brussels, Belgium. (poster)
6. Hamm J, Ceger P, Maull E, Padilla S, Perkins E, Planchart A, Stedman D, Tal T, Tanguay R, **Volz DC**, Baker G, Stout M, Walker N. 2017. SEAZIT: The National Toxicology Program’s systematic evaluation of the application of zebrafish in toxicology. 56th Annual Meeting of the Society of Toxicology, Baltimore, MD, USA. (poster)
7. Kupsco A, Leet J, Chen A, Stapleton H, Katiyar N, Kaundal R, Yu Y, Wang Y, **Volz DC**. 2017. Tris(1,3-dichloro-2-propyl) phosphate induces genome-wide hypomethylation within early zebrafish embryos. 56th Annual Meeting of the Society of Toxicology, Baltimore, MD, USA. (poster)
8. Vliet SM, Ho TC, **Volz DC**. 2017. High-content behavioral screening reveals that zebrafish embryos are unable to discriminate modes of action for neurotransmission-interfering compounds. 56th Annual Meeting of the Society of Toxicology, Baltimore, MD, USA. (poster)
9. **Volz DC**. 2017. Leveraging embryonic zebrafish to prioritize ToxCast testing. 56th Annual Meeting of the Society of Toxicology, Baltimore, MD, USA. (poster)
10. Morgan M, Larive C, **Volz DC**. 2017. Evaluations of toxicity in *Artemia franciscana*. Pittcon Conference and Expo, Chicago, IL USA. (poster)
11. Stinckens E, Vergauwen L, Cavallin JE, Blackwell BR, Witters H, Blust R, Ankley GT, **Volz DC**, Villeneuve DL, Knapen D. 2016. Validation of the AOP network “thyroperoxidase and/or deiodinase inhibition leading to impaired swim bladder inflation”. 4<sup>th</sup> Symposium on Fish and Amphibian Embryos as Alternative Models in Toxicology and Teratology, Paris, France. (poster)
12. Vliet SM, Ho T, **Volz DC**. 2016. High-content behavioral screening reveals that zebrafish embryos are unable to discriminate modes of action for neurotransmission-interfering compounds. 4<sup>th</sup> Symposium on Fish and Amphibian Embryos as Alternative Models in Toxicology and Teratology, Paris, France. (poster)
13. Kupsco AJ, Leet JK, Chen A, Stapleton HM, Katiyar N, Kaundal R, Yu Y, Wang Y. 2016. Tris(1,3-dichloro-2-propyl) phosphate induces genome-wide hypomethylation within early zebrafish embryos. 4<sup>th</sup> Symposium on Fish and Amphibian Embryos as Alternative Models in Toxicology and Teratology, Paris, France. (poster)
14. Diamante G, Muller G, **Volz DC**, Bainy A, Schlenk D. 2016. Developmental toxicity of 2- and 6-hydroxychrysene in zebrafish embryos. 37th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Orlando, FL, USA.
15. Becker Bertotto L, **Volz DC**, Schlenk D. 2016. Effects of bifenthrin on the estrogenic and dopaminergic pathways in embryos and juveniles of zebrafish (*Danio rerio*). 37th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Orlando, FL, USA.
16. Kupsco AJ, Leet JK, Chen A, Stapleton HM, Katiyar N, Kaundal R, Yu Y, Wang Y, **Volz DC**. 2016. Tris(1,3-dichloro-2-propyl) phosphate induces genome-wide hypomethylation within early zebrafish embryos. Toxicoeugenetics: The Interface of Epigenetics and Risk Assessment, Tysons, VA, USA. (poster)

17. Mehinto A, Dodder N, Mazor R, Denison M, Vliet SM, **Volz DC**, Hoh E, Maruya K. 2016. High-throughput bioanalytical screening of inland waters of Southern California. 36th International Symposium on Halogenated Persistent Organic Pollutants (Dioxin 2016), Florence, Italy. (platform)
18. **Volz DC**, Leet JK, Altomare D, Chen A, Stapleton HM, Yu Y, Wang Y. 2016. Transcriptome and DNA methylome profiling of early zebrafish embryos exposed to TDCPP. 55th Annual Meeting of the Society of Toxicology, New Orleans, LA, USA. (poster)
19. **Volz DC**, Hipszer RA, Leet JK, Raftery TD. 2015. Leveraging embryonic zebrafish to prioritize ToxCast testing. FutureTox III: Bridges for Translation, Society of Toxicology, Arlington, VA, USA. (poster)
20. **Volz DC**, Isales GM, Hipszer RA, Raftery TD, Chen A, Stapleton HM. 2015. Triphenyl phosphate-induced developmental toxicity in zebrafish: Potential role of the retinoic acid receptor. 12th International Symposium on Persistent Toxic Substances, Riverside, CA, USA. (platform)
21. **Volz DC**, Hipszer RA, Leet JK, Raftery TD. 2015. Leveraging embryonic zebrafish to prioritize ToxCast testing. 36th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Salt Lake City, UT, USA. (platform)
22. Leet JK, Hipszer RA, **Volz DC**. 2015. Butafenacil: A positive control for identifying anemia- and porphyria-inducing chemicals. 54th Annual Meeting of the Society of Toxicology, San Diego, CA, USA. (poster)
23. Raftery TD, **Volz DC**. 2015. Abamectin induces rapid and reversible hypoactivity within early zebrafish embryos. 54th Annual Meeting of the Society of Toxicology, San Diego, CA, USA. (poster)
24. Isales GM, Hipszer RA, Raftery TD, **Volz DC**. 2015. Triphenyl phosphate-induced developmental toxicity in zebrafish: Potential role of the retinoic acid receptor. 54th Annual Meeting of the Society of Toxicology, San Diego, CA, USA. (poster)
25. Leet JK, Hipszer RA, **Volz DC**. 2014. Butafenacil: A positive control for identifying anemia- and porphyria-inducing chemicals. 7th Aquatic Animal Models of Human Disease Conference, Austin, TX, USA. (poster)
26. Raftery TD, **Volz DC**. 2014. Abamectin induces rapid and reversible hypoactivity within early zebrafish embryos. 7th Aquatic Animal Models of Human Disease Conference, Austin, TX, USA. (poster)
27. **Volz DC**, Raftery TD, Yozzo KL, Leet JK. 2014. High-content screening of chemical toxicity in zebrafish embryos. 7th Aquatic Animal Models of Human Disease Conference, Austin, TX, USA. (platform)
28. Raftery TD, **Volz DC**. 2014. Abamectin induces rapid and reversible hypoactivity within early zebrafish embryos. 35th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Vancouver, BC, Canada. (platform)
29. Leet JK, Lindberg C, Bassett L, Isales GM, Yozzo KL, Raftery TD, **Volz DC**. 2014. High-content screening in zebrafish embryos identifies butafenacil as a potent inducer of anemia. 35th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Vancouver, BC, Canada. (platform)
30. **Volz DC**, Yozzo KL, Raftery TD, Leet JK. 2014. High-content screening of chemical toxicity in zebrafish embryos. 35th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Vancouver, BC, Canada. (poster)
31. Leet JK, Lindberg C, Bassett L, Isales GM, Yozzo KL, Raftery TD, **Volz DC**. 2014. High-content screening in zebrafish embryos identifies butafenacil as a potent inducer of anemia. 11th

- International Conference on Zebrafish Development and Genetics, Madison, WI, USA. (poster)
32. Raftery TD, Isales GM, Yozzo KL, **Volz DC**. 2014. High-content screening assay for identification of chemicals impacting spontaneous activity in zebrafish embryos. 11th International Conference on Zebrafish Development and Genetics, Madison, WI, USA. (poster)
  33. **Volz DC**, Yozzo KL, Isales GM, Raftery TD. 2014. High-content screening assay for identification of chemicals impacting cardiovascular function in zebrafish embryos. 11th International Conference on Zebrafish Development and Genetics, Madison, WI, USA. (poster)
  34. Gerlach CV, Das SR, **Volz DC**, Tanguay RL. 2014. Monosubstituted isopropylated triaryl phosphate, a major component of flame retardant mixture Firemaster 550, is an AhR agonist that exhibits AhR-independent cardiac toxicity. 53rd Annual Meeting of the Society of Toxicology, Phoenix, AZ, USA. (poster)
  35. Leet JK, Lindberg C, Bassett L, Isales GM, Yozzo KL, Raftery TD, **Volz DC**. 2014. High-content screening in zebrafish embryos identifies butafenacil as a potent inducer of anemia. 53rd Annual Meeting of the Society of Toxicology, Phoenix, AZ, USA. (poster)
  36. Raftery TD, Isales GM, Yozzo KL, **Volz DC**. 2014. High-content screening assay for identification of chemicals impacting spontaneous activity in zebrafish embryos. 53rd Annual Meeting of the Society of Toxicology, Phoenix, AZ, USA. (poster)
  37. **Volz DC**, Yozzo KL, Isales GM, Raftery TD. 2014. High-content screening assay for identification of chemicals impacting cardiovascular function in zebrafish embryos. 53rd Annual Meeting of the Society of Toxicology, Phoenix, AZ, USA. (poster)
  38. Raftery TD, Isales GM, Yozzo KL, **Volz DC**. 2013. High-content screening assay for identification of chemicals impacting spontaneous locomotion in zebrafish embryos. 34th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA. (poster)
  39. Yozzo KL, Isales GM, Raftery TD, **Volz DC**. 2013. High-content screening assay for identification of chemicals impacting cardiovascular function in zebrafish embryos. 34th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA. (platform)
  40. **Volz DC**, McGee SP, Konstantinov A, Stapleton HM. 2013. Aryl phosphate esters within a major PentaBDE replacement product induce cardiotoxicity in developing zebrafish embryos: Potential role of the aryl hydrocarbon receptor. 34th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA. (poster)
  41. **Volz DC**, McGee SP, Konstantinov A, Stapleton HM. 2013. Aryl phosphate esters within a major PentaBDE replacement product induce cardiotoxicity in developing zebrafish embryos: Potential role of the aryl hydrocarbon receptor. Sixth International Symposium on Brominated Flame Retardants, San Francisco, CA, USA. (platform)
  42. **Volz DC**, McGee SP, Konstantinov A, Stapleton HM. 2013. Aryl phosphate esters within a major PentaBDE replacement induce cardiotoxicity in developing zebrafish embryos: Potential role of the aryl hydrocarbon receptor. 52nd Annual Meeting of the Society of Toxicology, San Antonio, TX, USA. (poster)
  43. Jayasinghe S, **Volz DC**. 2012. G-protein-coupled estrogen receptor-1 (GPER): A potential target for xenoestrogens during vertebrate embryogenesis. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (platform)

44. Yozzo KL, **Volz DC**. 2012. Adverse outcome pathways during zebrafish embryogenesis: A case study using paraoxon. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (platform)
45. **Volz DC**, Villeneuve D, et al. 2012. Alternatives to the fish early life-stage test: A research strategy for discovering and annotating adverse outcome pathways during fish development. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (platform)
46. McGee SP, Cooper EM, Stapleton HM, **Volz DC**. 2012. Early embryogenesis is susceptible to developmental TDCPP exposure. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (platform)
47. Villeneuve D, **Volz DC**, et al. 2012. Discovering and annotating fish early life-stage (FELS) adverse outcome pathways: Putting the research strategy into practice. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (platform)
48. Embry MR, Villeneuve D, **Volz DC**, et al. 2012. Alternatives to the fish early life-stage test: Developing a conceptual model for early fish development. 33rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Long Beach, CA, USA. (poster)
49. McGee SP, Cooper EM, Stapleton HM, **Volz DC**. 2012. Early embryogenesis is highly susceptible to TDCPP-induced developmental toxicity. 51st Annual Meeting of the Society of Toxicology, San Francisco, CA, USA. (poster)
50. Jayasinghe BS, **Volz DC**. 2012. G-protein-coupled estrogen receptor 1 (GPER) activation results in cardiovascular impairments during zebrafish embryogenesis. 51st Annual Meeting of the Society of Toxicology, San Francisco, CA, USA. (poster)
51. Embry MR, Belanger SE, Busquet F, Demeneix B, Fenske M, Halder M, Laenge R, Lampi M, Leonard M, Lillicrap A, McMaster M, Norberg-King T, Oris JT, Ortego L, Sanderson H, Scholz S, Segner H, **Volz D**, Wilson P. 2011. Development of a long-term strategy for chronic ecotoxicity and animal alternatives. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry – Europe, Milan, Italy. (poster)
52. Jayasinghe BS, **Volz DC**. 2011. Aberrant ligand-induced activation of G-protein-coupled estrogen receptor 1 (GPER) results in developmental malformations during vertebrate embryogenesis. 50th Annual Meeting of the Society of Toxicology, Washington, DC, USA. (poster)
53. Embry M, **Volz DC**. 2011. Advancing predictive ecotoxicology testing and environmental risk assessment in the 21<sup>st</sup> Century. 50th Annual Meeting of the Society of Toxicology, Washington, DC, USA. (platform)
54. Villeneuve DL, Embry MR, **Volz DC**. 2011. Adverse outcome pathways and systems biology as conceptual approaches to support development of 21<sup>st</sup> century test methods and extrapolation tools. 50th Annual Meeting of the Society of Toxicology, Washington, DC, USA. (platform)
55. Embry M, Belanger S, Busquet F, Demeneix B, Fenske M, Halder M, Laenge R, Lampi M, Leonard M, Lillicrap A, McMaster M, Norberg-King T, Oris J, Ortego L, Sanderson H, Scholz S, Segner H, Villalobos S, **Volz D**, Wilson P. 2010. Development of alternatives to chronic ecotoxicity tests: predicting early-life stage and endocrine-mediated toxicity in aquatic vertebrate species. 31st Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Portland, OR, USA. (poster)
56. Norberg-King T, Belanger S, Busquet F, Embry M, Halder M, Leonard M, Lillicrap A, **Volz D**. 2010. Chronic modes of action for ecotoxicity: integrated testing strategies for the 21<sup>st</sup>

- century. 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry – Europe, Seville, Spain. (poster)
57. Nichols JW, Breen M, Denver R, DiStefano III J, Edwards J, Hoke R, **Volz DC**, Zhang X. 2010. Testing and risk assessment of chemicals that impact highly adaptive biological systems: The case of endocrine systems. 49th Annual Meeting of the Society of Toxicology, Salt Lake City, UT, USA. (poster)
58. **Volz DC**, Kullman SW, Howarth DL, Hardman RC, Hinton DE. 2010. Protective response of the Ah receptor to ANIT-induced biliary epithelial cell toxicity in see-through medaka. 49th Annual Meeting of the Society of Toxicology, Salt Lake City, UT, USA. (poster)
59. Nichols JW, Breen M, Denver R, DiStefano III J, Edwards J, Hoke R, **Volz DC**, Zhang X. 2009. Testing and risk assessment of chemicals that impact highly adaptive biological systems: The case of endocrine systems. 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, New Orleans, LA, USA. (platform)
60. Bartell S, Nair S, Hendley P, **Volz DC**. 2009. Probabilistic assessment of potential atrazine-induced effects in Midwestern streams using the Comprehensive Aquatic Systems Model for Atrazine. 30th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, New Orleans, LA, USA. (platform)
61. Hendley PH, Harbourt CM, Miller P, Prenger JJ, **Volz DC**. 2009. Agrochemical surface water monitoring: Interpreting results from the atrazine ecological monitoring study. 238th American Chemical Society National Meeting, Washington, DC, USA. (platform)
62. Bartell SM, Nair SK, **Volz DC**. 2009. Modeling community-level responses to atrazine in Midwestern streams. 238th American Chemical Society National Meeting, Washington, DC, USA. (platform)
63. Hendley P, **Volz DC**, Harbourt CM, Bartell SM. 2008. Atrazine monitoring and ecological risk assessment for small streams across the US Midwest corn/sorghum region. 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Tampa, FL, USA.
64. Bartell SM, Nair S, Hendley P, Campbell D, **Volz DC**. 2008. Modeling aquatic ecological effects of atrazine using the comprehensive aquatic ecological model. 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Tampa, FL, USA.
65. **Volz DC**, Bencic D. 2007. Next steps: Integrating toxicogenomics data into the regulatory paradigm. 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Milwaukee, WI, USA.
66. **Volz DC**, Bartell S, Nair S, Hendley P. 2007. Modeling the potential for atrazine-induced changes in Midwestern stream ecosystems using the Comprehensive Aquatic Systems Model (CASM). 28th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Milwaukee, WI, USA.
67. Howarth DL, **Volz DC**, Hagey LR, Hinton DE, Kullman SW. 2006. Bile composition changes in Japanese medaka (*Oryzias latipes*) after exposure to  $\alpha$ -naphthylisothiocyanate: relating gene expression changes to phenotype. 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Montreal, Québec, Canada.
68. Miller HD, Clark BW, **Volz DC**, Hinton DE, Kullman SW. 2006. 17 $\alpha$ -Ethinylestradiol induced gene expression changes in the testis and subsequent pathogenesis in medaka fish. 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Montreal, Québec, Canada.
69. **Volz DC**, Hinton DE, Law JM, Kullman SW. 2005. Dynamic gene expression changes precede dioxin-induced liver pathogenesis in medaka. 26th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Baltimore, MD, USA.

70. Bencic DC, **Volz DC**, Chen P, Hinton DE, Kullman SW. 2004. Xenobiotic induced organ-specific gene expression and macro/microarray development in medaka (*Oryzias latipes*). 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Portland, OR, USA.
71. **Volz DC**, Bencic DC, Hinton DE, Kullman SW. 2004. 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) induces organ-specific differential gene expression in male Japanese medaka (*Oryzias latipes*). 25th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Portland, OR, USA.
72. Cary TL, **Volz DC**, Chandler GT. 2003. The ultraviolet degradation product of fipronil, desulfinyl fipronil, causes equivalent sublethal toxicity to the meiobenthic copepod, *Amphiascus tenuiremis*. 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Austin, TX, USA.
73. Chandler GT, Cary TL, Block DS, **Volz DC**, Bejarano AC. 2003. Life-cycle toxicity testing with meiobenthic copepods in a 96-well microplate format: Useful models for rapid assessment of endocrine, reproductive and population-level effects. Aquatic Invertebrate Life-Cycle Testing Workshop with Endocrine Considerations, ASTM Workshop (Sub-Committee E-47.01), Austin, TX, USA.
74. Block DS, Cary TL, Griffitt RJ, **Volz DC**, Chandler GT. 2003. Evaluation of suspected endocrine modulating chemicals in invertebrate life-cycle bioassays: The use and validation of endocrine endpoints. Aquatic Invertebrate Life-Cycle Testing Workshop with Endocrine Considerations, ASTM Workshop (Sub-Committee E-47.01), Austin, TX, USA.
75. **Volz DC**, Cary TL, Chandler GT, Walse SS, Ferry JL, Klosterhaus SL. 2003. Fipronil effects on copepod development, fertility, and reproduction. Carolinas Regional Society of Environmental Toxicology and Chemistry Meeting, Charleston, SC, USA.
76. Cary TL, Chandler GT, **Volz DC**, Walse SS, Ferry JL. 2003. Fipronil induces male infertility in an estuarine meiobenthic copepod. Carolinas Regional Society of Environmental Toxicology and Chemistry Meeting, Charleston, SC, USA.
77. **Volz DC**, Wirth EF, Fulton MF, Scott GI, Block DS, Chandler GT. 2002. Endocrine-mediated effects of UV and endosulfan on grass shrimp (*Palaemonetes pugio*) reproduction. 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Salt Lake City, UT, USA.
78. **Volz DC**, Cary TL, Block DS, Chandler GT. 2002. Lipovitellin quantification in sediment-dwelling copepods: a potential screening tool for endocrine disrupting compounds. 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Salt Lake City, UT, USA.
79. Chandler GT, Scott GI, Ferry JL, **Volz DC**, Cary TL, Wirth EF, Block DS, Fulton MH. 2002. Environmentally-mediated endocrine disruption in estuarine crustaceans: new approaches for evaluating risks of reproductive and endocrine toxicity. Environmental Protection Agency Science Forum 2002: Meeting the Challenges, Washington, DC, USA.
80. **Volz DC**, Wirth EF, Fulton MF, Scott GI, Block DS, Chandler GT. 2002. Endocrine-mediated effects of UV radiation and endosulfan on the growth and reproduction of the grass shrimp, *Palaemonetes pugio*. Carolinas Regional Society of Environmental Toxicology and Chemistry Meeting, Raleigh, NC, USA.
81. Chandler GT, Klosterhaus S, **Volz D**, Cary T, Block D. 2001. New life-cycle culturing assays of meiobenthic copepod reproductive toxicity from suspected EDC's – a case study with fipronil. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Baltimore, MD, USA.



82. **Volz DC**, Meador TB, Block DS, Chandler GT. 2001. Biomolecular approaches to assessment of endocrine disruption in sediment-dwelling crustaceans. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Baltimore, MD, USA.
83. Block DS, **Volz DC**, Chandler GT. 2001. Non-radiometric quantification of crustacean ecdysteroids: A potential screening tool for endocrine disrupting compounds. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Baltimore, MD, USA.
84. **Volz DC**, Chandler GT. 2001. Isolation and characterization of vitellin from the estuarine meiobenthic copepod *Amphiascus tenuiremis* for biomolecular and reproductive studies in crustacean endocrine disruption. Eleventh International Meiobethologist Conference, Boston, MA, USA.
85. **Volz DC**, Kawaguchi T, Chandler GT. 2000. Isolation and purification of vitellin from the estuarine meiobenthic copepod *Amphiascus tenuiremis* and amphipod *Leptocheirus plumulosus* for biomolecular and reproductive studies in crustacean endocrine disruption. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA.
86. Chandler GT, **Volz DC**, Klosterhaus SL. 2000. Microplate culture and laser-scanning confocal microscopy for assessment of meiobenthic copepod reproductive toxicity from suspected endocrine disrupting chemicals. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA.
87. Klosterhaus SL, **Volz DC**, Chandler GT. 2000. A full life-cycle screening assay for potential endocrine disruption effects sediment-dwelling copepods: an application using the IGR pyriproxyfen. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry – North America, Nashville, TN, USA.