

SIGMUND J. DEGITZ, JR.

Toxicologist
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Education:

B.S., Biology, Northland College, Ashland, WI, 1991
Ph.D., Toxicology, University of Illinois, Urbana-Champaign, 1996

Employment:

1998-Present Toxicologist, U.S. EPA, Duluth, MN
1996-1998 Postdoctoral Research Fellow, University of North Carolina, Chapel Hill

Research Interests and Skills:

Whole organism developmental toxicology; amphibian thyroid axis disruption; cellular and molecular mechanisms of developmental toxicity; DNA microarray

Professional Societies:

Editorial board for Environmental Toxicology and Chemistry 2006
Editorial board for Ecotoxicology and Environmental Safety 2004-present

Selected Appointments/Honors/Major Awards:

University of Minnesota-Duluth, Adjunct Associate, Integrated Biosciences Graduate Program
Bronze Medal OECD Support Team. For leadership in development of internationally-harmonized EDC Test methods through the OECD. 2003
Bronze Medal Promoting Strong Science in Agency Decisions. For significant achievements in working with program offices to promote the use of strong science in Agency decisions. 2003
STAA award level 3

Selected Publications:

Helbing, CC, Ji L, Bailey CM, Veldhoen N, Zhang F, Holcombe GW, Kosian PA, Tietge JE, and SJ Degitz. (2007) Identification of gene expression indicators for thyroid axis disruption in a *Xenopus laevis* metamorphosis screening assay. Part 2: Effects on the tail and hindlimb (In press Aquatic Toxicology)

Helbing CC, Bailey CM, Ji L, Gunderson MP, Zhang F, Veldhoen N, Skirrow RC, Mu R, Lesperance M, Holcombe GW, Kosian PA, Tietge JE, and SJ Degitz. (2007) Identification of gene expression indicators for thyroid axis disruption in a *Xenopus laevis* metamorphosis screening assay. Part 1: Effects on the brain (In press Aquatic Toxicology)

Douglas JF, Denver R, Degitz SJ, Tietge JE, and LW Touart (2007) The hypothalamic-pituitary-thyroid (HPT) axis in frogs and its role in frog development and reproduction. (In press)

Villeneuve DL, Miracle AL, Jensen KM, Degitz SJ, Kahl MD, Korte JJ, Greene KJ, Blake LS, Linnum AL, Ankley GT (2006) Development of quantitative real-time PCR assays for fathead minnow (*Pimephales promelas*) gonadotropin beta subunit mRNAs to support endocrine disruptor research. *Comp Biochem Physiol C Toxicol Pharmacol*.

Ankley GT, Daston GP, Degitz SJ, Denslow ND, Hoke RA, Kennedy SW, Miracle AL, Perkins EJ, Snape J, Tillitt DE, Tyler CR, and D Versteeg (2006) Toxicogenomics in Regulatory Ecotoxicology *Environmental Science and Technology* 40(13):4055-4065.

Zhang F, Degitz SJ, Holcombe GW, Kosian PA, Tietge J, Veldhoen N, Helbing CC. (2006) Evaluation of gene expression endpoints in the context of a *Xenopus laevis* metamorphosis-based bioassay to detect thyroid hormone disruptors. *Aquatic Toxicology*. 76(1):24-36.

Degitz SJ, Holcombe GW, Flynn KM, Kosian PA, Korte JJ, Tietge JE. (2005) Progress towards development of an amphibian-based thyroid screening assay using *Xenopus laevis*. Organismal and thyroidal responses to the model compounds 6-propylthiouracil, methimazole, and thyroxine. *Toxicological Sciences*. 87(2):353-64.

Tietge, JE, GW, Holcombe, KM, Flynn, PA, Kosian, JJ, Korte, LE, Anderson, DC, Wolf, and SJ, Degitz. (2005). Metamorphic inhibition of *Xenopus laevis* by sodium perchlorate: effects on development and thyroid histology. *Environmental Toxicology and Chemistry*, 24:926-933.

- Ankley GT, SJ Degitz, SA Diamond, and JE Tietge (2004). Assessment of environmental stressors potentially responsible for malformations in North American anuran amphibians. *Ecotoxicology and Environmental Safety* 58, 7-16.
- Degitz SJ, Rogers JM, Zucker RM, Hunter ES 3rd. (2004) Developmental toxicity of methanol: Pathogenesis in CD-1 and C57BL/6J mice exposed in whole embryo culture. *Birth Defects Res Part A Clin Mol Teratol.* 70,179-84
- Degitz SJ, Zucker RM, Kawanishi CY, Massenburg GS, Rogers JM. (2004) Pathogenesis of methanol-induced craniofacial defects in C57BL/6J mice. *Birth Defects Res Part A Clin Mol Teratol.* 70, 172-8.
- Rogers JM, Brannen KC, Barbee BD, Zucker RM, Degitz SJ. (2004) Methanol exposure during gastrulation causes holoprosencephaly, facial dysgenesis, and cervical vertebral malformations in C57BL/6J mice. *Birth Defects Res Part B Dev Reprod Toxicol.* 71, 80-8.
- Kosian PA, EA Makynen, GT Ankley, and SJ Degitz.(2003) Bioconcentration and Metabolism of All-Trans Retinoic Acid by Three Native North American Ranids. *Toxicological Sciences* 74, 147-156.
- Degitz SJ, PA Kosian, GW Holcombe, JE Tietge, EJ Durhan, and GT Ankley.(2003) Comparing the effects of Retinoic Acid on amphibian limb development and lethality: chronic exposure results in lethality not limb malformations. *Toxicological Sciences* 74, 139-146
- Degitz, SJ, EJ Durhan, PA Kosian, GT Ankley, and JE Tietge. (2003) Development toxicity of methoprene and its degradation products in *Xenopus laevis*. *Aquatic Toxicology* 64, 97-105.
- Gray, L.E, Ostby, V. Wilson, C. Lambright, K. Bobseine, P. Hartig, A. Hotchkiss, C. Wold, J. Furr, M. Price, L. Parks, R. Cooper, T. Stoker, S. Laws, S. Degitz, K.M. Jensen, M.D. Kahl, J.J. Korte, E.A. Makynen, J.E. Tietge, and G.T. Ankley (2002) Xenoendocrine disruptors - tiered screening and testing: Filling key data gaps. *Toxicology.* 181-182, 371-82.
- Simon R, JE Tietge, B Michalke, SJ Degitz, and KW Schramm. (2002) Iodine species and the endocrine system: thyroid hormone levels in adult *Danio rerio* and developing *Xenopus laevis*. *Anal Bioanal Chem* 372, 481-5
- Tietge, JE, SA Diamond, GT Ankley, DL DeFoe, GW Holcombe, KM Jensen, SJ Degitz, GE Elonen, and E Hammer (2000). Ambient solar UV-B causes mortality in larvae of three species of *Rana*. *Photochemistry and Photobiology* 74, 261-268.
- Degitz SJ, PA Kosian, EA Makynen, KM Jensen and GT Ankley (2000) Stage- and Species-specific Developmental Toxicity of All- Trans Retinoic Acid in Four Native North American Ranids and *Xenopus laevis*. *Toxicological Sciences* 57, 264-274.
- Ankley GT, JE Tietge, GW Holcombe, DL DeFoe, SA Diamond, KM Jensen, and SJ Degitz.(2000) Effects of laboratory ultraviolet light and natural sunlight on survival and development of *Rana pipiens*. *Can. J. Zool.* 78, 1092-1100.