

CURRICULUM VITAE

Jared V. Goldstone

Marine Toxicologist
Research Specialist
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EDUCATION

B.S. Yale University, Chemistry, 1993

S.M. Massachusetts Institute of Technology, Inorganic Chemistry, 1996

Ph.D. MIT-WHOI Joint Program in Oceanography, Chemical Oceanography, 2002

PROFESSIONAL EXPERIENCE

Research Specialist

April 2009-present

Department of Biology, Woods Hole Oceanographic Institution

Visiting Investigator

October 2006-April 2009

Department of Biology, Woods Hole Oceanographic Institution

NIH Kirschstein NRSA Postdoctoral Fellow

Sept 2003-Sept 2006

Department of Biology, Woods Hole Oceanographic Institution

Postdoctoral Investigator

July 2002-Sept 2003

Department of Biology, Woods Hole Oceanographic Institution

Research Assistant Professor

March 2002-July 2002

University of Maryland, College Park

AWARDS

Ruth L. Kirschstein National Research Service Award

Ralph M. Parsons Graduate Fellowship

United States Navy Antarctic Service Medal

National Science Foundation Antarctic Service Award

PROFESSIONAL AFFILIATIONS

American Chemical Society (since 1993), Society for Molecular Biology and Evolution, Society of Toxicology Full Member, Faculty of 1000

RESEARCH INTERESTS

Evolution of chemical defense enzymes in fish. Evolution of the 'chemical space' of animal metabolism in response to the chemical environment. Cytochrome P450, UGT, GST evolution, nomenclature, structure, function, and modeling. Toxicology of legacy and emerging contaminants in aquatic organisms, especially developmental toxicology.

PROFESSIONAL ACTIVITIES

Manage WHOI Biology Department bioinformatics servers (2004-present). Direct WHOI Bioinformatics Resource (2014 – present). Member, WHOI Information Systems Advisory Committee (2105-present). Member, WHOI Gender Equity Committee (2015- present). Member, WHOI Institutional Radiation Safety Committee (2013-present).

International Scientific Organizing Committee, Pollutant Responses in Marine Organisms (PRIMO) conference series. International Scientific Organizing Committee Cytochrome P450 Biodiversity and Biotechnology conference series. Co-organized 10th International Symposium on Cytochrome P450 Biodiversity and Biotechnology (2010). Cytochrome P450 Nomenclature Committee (2009-present); Session organizer, Society of Environmental Chemistry and Toxicology Nation Meeting, Boston, MA, 2011.

Board of Health, Falmouth, MA (2007-present; Vice Chair 2012-2013; Chair 2013-present)

Reviewer for *Aquatic Toxicology*; *BMC Genomics*; *Deep Sea Research*; *Photochemistry and Photobiology*; *Toxicological Sciences*; *Environmental Science and Technology*; *Molecular Biology Reports*; *Comp. Biochem. Physiol.*; *Comparative Biochemistry and Biophysics*; *Molecular Biology and Evolution*; *Biochemical Genetic*; *Environmental Toxicology and Chemistry*; *Marine and Environmental Research*; *Polar Biology*; *J. Marine Biological Association of the United Kingdom* *Journal of Hazardous Materials*; *Toxicon*; *PLoS One*, National Science Foundation, National Institutes of Health (ZRG MDCN-B 55).

PARTICIPATION IN EDUCATION PROGRAM

Founded annual WHOI Postdoctoral Symposium. Co-founded the WHOI Postdoctoral Association. First postdoctoral member of the WHOI Academic Council. Co-author of the Postdoctoral Memo, formal agreement between postdoctoral advisors and postdoctoral fellows/investigators.

SUPERVISION

Suzanne Kern (Summer Fellow, 2003)

Mingxi Yang (Summer Fellow, 2004)

Thiago Parente (Guest Student, 2008; co-supervised with Dr. John Stegeman)

Juliano Zanette (Guest Student, 2008; co-supervised with Dr. John Stegeman)

Ryan Walsh (NOAA Hollings Scholar, 2016; co-supervised with Dr. John Stegeman)

Rachel Harbeitner (Research Assistant II; 2013-2014)

Matthew Salanga (Postdoctoral Investigator; 2015-present)

Francisco Mora (Postdoctoral Investigator, 2015-present)

Annette Govindarajan (Research Specialist – part time supervision; 2015-present)

FUNDED GRANTS (Previous and ongoing)

F32ES012794 (PI: Goldstone) NIH NRSA Kirschstein Postdoctoral Fellowship Mechanism of cytochrome P450 uncoupling and inactivation	09/2003-09/2006
R21HD073805 (PI: Goldstone) NIH NICHD TALENs-based PXR Knockout and Humanized Zebrafish	07/2013 - 06/2016
U41HG003345 (PI: Birney; Goldstone subcontract) NHGRI Nomenclature of Human and Vertebrate Genes	09/2013 - 06/2017
WHOI Deep Sea Institute (coPI with T. Shank, J. Stegeman) Cloning and gene expression analysis of pollutant-responsive genes in deep sea Bathymodiolin mussels	01/2009-12/2011
NOAA MIT Sea Grant (co-Investigator with J. Stegeman) Biomarkers for coastal pollution in mussels, <i>Mytilus</i> species	01/2009-12/2011
P42 ES007381 (PI: Ozonoff/Sherr, BU) Superfund Research Program (co-Investigator on Project 5) Developmental Toxicity of non-Dioxin-like PCBs and Chemical Mixtures	05/2012-05/2017
R21NS084897 (PI: Goldstone) NINDS Screening Therapies to Counteract Developmental Chlorpyrifos Intoxication	09/2014 - 09/2017
Ruth D. Turner Foundation Genome sequencing of the blue mussel for biomonitoring	01/2016-12/2017

PAPERS IN REFEREED JOURNALS AND BOOKS (h-index 26)

Published or in press

56. A. Maldonado, R. Lavodo, G. Ostrander, S. Knuston, M. Slattery, S. Ankisetty, J. V. Goldstone, K. Watanabe, E. Hoh, J. M. Rimoldi, D. Schlenk, Biochemical Mechanisms for Geographical Adaptations to Novel Toxin Exposures in Butterflyfish *PloSOne* (2016) 11(5):e0154208
55. E. Jansson, A. Mattsson, J. V. Goldstone, and C. Berg. Sex-dependent expression of anti-Müllerian hormone (amh) and amh receptor 2 during sex organ differentiation and characterization of Müllerian duct development in *Xenopus tropicalis* *General and Comparative Endocrinology* (2016) 229:132-44
54. B. Lemaire, A. Kubota, C. M. O'Meara, D. C. Lamb, R. L. Tanguay, J. V. Goldstone, and J. J. Stegeman. Orphan Cytochrome P450 20A1 in zebrafish: Cloning, regulation and potential involvement in hyperactivity disorders. *Toxicology and Applied Pharmacology* (2016) 296:73-84
53. J. V. Goldstone, M. Sundaramoorthy, B. Zhao, M. R. Waterman, J. J. Stegeman and D. C. Lamb. Genetic and structural analyses of cytochrome P450 hydroxylases in sex hormone biosynthesis: Sequential origin and subsequent coevolution *Molecular Phylogenetics and Evolution* (2016) 94:676-687.

- 52: J. J. Stegeman, L. Behrendt, B. R. Woodin, A. Kubota, B. Lemaire, D. Pompon, J. V. Goldstone, P. Urban. Functional characterization of zebrafish cytochrome P450 1 family proteins expressed in yeast. *Biochim Biophys Acta* (2015) 1850(11) 2340-2352.
51. R. Lille-Langøy, J. V. Goldstone, M. Rusten, M. R. Milnes, R. Male, J. J. Stegeman, B. Blumberg, and A. Goksøyr. Environmental contaminants activate human and polar bear (*Ursus maritimus*) promiscuous xenobiotic receptors (PXR, NR1I2) differently *Toxicology and Applied Pharmacology* (2015) 284(1):54-64.
50. E. B. Fritsch, J. J. Stegeman, J. V. Goldstone, D. E. Nacci, D. Champlin, S. Jayaraman, R. E. Connon and I. N. Pessah Transgenerational Adaptation of EC Coupling Proteins in Atlantic Killifish (*Fundulus heteroclitus*) Highly Exposed to PCBs *Aquatic Toxicology* (2015) 159:156-66
49. A. Kubota, J. V. Goldstone, B. Lemaire, M. Takata, B. R. Woodin, and J. J. Stegeman Pregnane X receptor and aryl hydrocarbon receptor both are involved in transcriptional regulation of *pxr*, *CYP2* and *CYP3* genes in developing zebrafish *Toxicological Sciences* (2015) 143(2):398-407.
48. A. M. Morrison, J. V. Goldstone, D. C. Lamb, A. Kubota and J. J. Stegeman. Identification, Modeling and Ligand Affinity of Early Deuterostome CYP51s, and Functional Characterization of Recombinant Zebrafish Sterol 14a-Demethylase *Biochimica Biophysica Acta – General Subjects* (2014) 1840(6):1825-36
47. A. C. D. Bainy, A. Kubota, J. V. Goldstone, R. Lille-Langøy, S. I. Karchner, M. E. Hahn, A. Goksøyr, and J. J. Stegeman, Functional Characterization of a Full Length Pregnane-X-Receptor, *in vivo* Expression, and Identification of PXR Alleles in Zebrafish (*Danio rerio*). *Aquatic Toxicology* (2013) 42-143:447-57
46. L. A. Williams, A. Timme-Laragy, J. V. Goldstone, A. G. McArthur, J. J. Stegeman, R. Smolowitz, and M. E. Hahn Developmental expression of the Nfe2-related factor (Nrf) transcription factor family in the zebrafish, *Danio rerio*. *PLoS One* (2013) 8(10):e79574
45. A. Timme-Laragy, J. V. Goldstone, B. R. Imhoff, J. J. Stegeman, M. E. Hahn, and J. M. Hansen. Glutathione redox dynamics and expression of glutathione-related genes in the developing embryo. *Free Rad Biol Med.* (2013) 65C:89-101
44. A. Kubota, A. C. D. Bainy, B. R. Woodin, J. V. Goldstone and J. J. Stegeman. Developmental expression of cytochrome P450 2AA genes in zebrafish (*Danio rerio*) and their response to phenobarbital-type inducers. *Toxicology and Applied Pharmacology* (2013) 272 (1):172-179.
43. C. T. Amemiya, J. Alföldi, et al (91 authors) The African coelacanth genome provides insights into tetrapod evolution. (2013). *Nature*. 496, 311–316.
42. Zanette J, Jenny MJ, Goldstone JV, Parente T, Woodin BR, Bainy AC, J. J. Stegeman. (2013) Identification and expression of multiple CYP1-like and CYP3-like genes in the bivalve mollusk *Mytilus edulis*. *Aquat Toxicol.* 128-129:101-12.
41. D. R. Nelson, J. V. Goldstone, J. J. Stegeman. (2013) The cytochrome P450 genesis locus: The origin and evolution of animal cytochrome P450s. *Philosophical Transactions of the Royal Society B Biological Sciences* 6;368(1612):20120474
40. H. M. H. Goldstone, S. Tokugawa, J. J. Schelzinger, J. V. Goldstone, J. J. Stegeman. EZR1: A novel family of highly expressed retrotransposon deletion derivatives induced by TCDD and regulated by NF- κ B in embryos of zebrafish (*Danio rerio*). (2012) *Zebrafish* 9(1):15-25

39. A. R. Timme-Laragy, S. I. Karchner, D.G. Franks, M. J. Jenny, J.V. Goldstone, M. E. Hahn Nrf2b: A novel zebrafish paralog of the oxidant-responsive transcription factor Nrf2 (2012) *J. Biol. Chem.* 287(7):4609-4627
38. J. V. Goldstone and J. J. Stegeman. Methodological approaches to cytochrome P450 profiling in embryos. (2012) *Methods in Molecular Biology*
37. T. E. Parente, MF Rebelo, ML da-Silva, BR Woodin, J.V. Goldstone, PM Bisch, FJ Paumgarten, JJ Stegeman. Structural features of cytochrome P450 1A associated with the absence of EROD activity in liver of the loricariid catfish *Pterygoplichthys* sp. (2011) *Gene*. Epub Aug 5.
36. B. Shrestha, J. M. Reed, P. T. B. Starks, G. E. Kaufman, J. V. Goldstone, M. E. Roelke, S. J. O'Brien, K.-P. Koepfli, L. G. Frank, and M. H. Court (2011) Evolution of a major drug metabolizing enzyme defect in the domestic cat and other Felidae: Phylogenetic timing and the role of hypercarnivory *PLoS One* 6(3):e18046.
35. A. Kubota, J. J. Stegeman, J.V. Goldstone, D. R. Nelson, E. Y. Kim, S. Tanabe, H. Iwata. Cytochrome P450 CYP2 genes in the common cormorant: Evolutionary relationships with 130 diapsid CYP2 clan sequences and chemical effects on their expression. *Comp Biochem Physiol C Toxicol Pharmacol.* (2011) 153(3):280-9.
34. K. Gao., I. Brand, J.V. Goldstone, M.E. Jönsson . Cytochrome P450 1A, 1B, and 1C mRNA induction patterns in three-spined stickleback exposed to a transient and a persistent inducer. *Comp Biochem Physiol C Toxicol Pharmacol.* (2011) 154(1):42-55.
33. J. V. Goldstone, A. G. McArthur, J. Zanette, T. Parente, M. Jönsson, D. R. Nelson, and J. J. Stegeman. Identification and Developmental Expression of the Full Complement of Cytochrome P450 Genes in Zebrafish *BMC Genomics.* (2010) 11:643
32. K. E. Whalen, J. V. Goldstone, M. E. Hahn. Cytochrome P450 diversity and induction by gorgonian allelochemicals in the marine gastropod *Cyphoma gibbosum*. *BMC Ecol.* (2010) 10:24
31. M. E. Jönsson, C. Berg, J. V. Goldstone, J. J. Stegeman. New CYP1 genes in the frog *Xenopus* (*Silurana*) *tropicalis*: Induction patterns and effects of AHR agonists during development *Toxicol Appl Pharmacol* (2011) 250(2):170-83
30. M. C. Celander, J. V. Goldstone, N. D. Denslow, T. Iguchi, P. Kille, R. D. Meyerhoff, B. A. Smith, T. H. Hutchinson, J. R. Wheeler. Species Extrapolation for the 21st Century. *Environmental Toxicology and Chemistry* (2011) 30(1) 52-63
29. M. C. K. Leung, J. V. Goldstone, W. A. Boyd, J. H. Freedman, J. N. Meyer *Caenorhabditis elegans* generates biologically relevant levels of genotoxic metabolites from aflatoxin B1 but not benzo[a]pyrene *in vivo*. *Toxicol. Sci.* (2010). 118(2):444-53.
28. K. E. Whalen, E. E. Sotka, J. V. Goldstone, M. E. Hahn. The role of multixenobiotic transporters in molluscan predators as defense mechanisms against dietary chemical stress. *Comp Biochem. Physiol.* (2010) 52(3):288-300
27. J. J. Stegeman, J. V. Goldstone, M. E. Hahn. Perspectives in Zebrafish as a Model in Environmental Toxicology. In: *Zebrafish*. S. F. Perry, M. Ekker, A. P. Farrell C. J. Brauner (eds). Elsevier. (2010)
26. M. E. Jönsson, K. Gao, J. A. Olsson, J. V. Goldstone, I. Brandt. Induction patterns of new CYP1 genes in environmentally exposed rainbow trout. *Aquatic Toxicology* (2010) 98(4) 311-321.

25. L. Behrendt, M. E. Jonsson, J. V. Goldstone, and J. J. Stegeman. Induction of cytochrome P450 1 genes and stress response genes in zebrafish embryos exposed to ultraviolet radiation. *Aquatic Toxicology* (2010) 98(1), 74-82.
24. J. Zannette, J. V. Goldstone, Afonso C. D. Bainy, and J. J. Stegeman. New cytochrome P450 genes in bivalves – Identification of CYPs from mussel and oyster ESTs. *Marine Environmental Research* (2010) 69 Suppl:S1-3.
23. J. Zannette, M. J. Jenny, J. V. Goldstone, B. R. Woodin, Lauren A. Watka, Afonso C. D. Bainy, and J. J. Stegeman. New Cytochrome P450 1B1, 1C2 and 1D1 Genes in the Killifish *Fundulus heteroclitus*: Basal Expression and Response of Five Killifish CYP1s to the AHR Agonist PCB126. *Aquatic Toxicology*. (2009) 93(4), 234-43.
22. J. V. Goldstone, M. E. Jönsson, L. Behrendt, B. R. Woodin, M. J. Jenny, D. R. Nelson and J. J. Stegeman. Cytochrome P450 1D1: a novel CYP1A-related gene that is not transcriptionally activated by PCB126 or TCDD. *Archives of Biochemistry and Biophysics*. (2009) 482(1-2):7-16.
21. J. V. Goldstone. Environmental sensing and response genes in Cnidaria: the chemical defensesome in the sea anemone *Nematostella vectensis*. *Cell Biology and Toxicology* (2008) 24(6) 483-502.
20. K. E. Whalen, D. Morin, C. Y. Lin, R. S. Tjeerdema, J. V. Goldstone, M. E. Hahn. Proteomic identification, biochemical characterization and cDNA cloning of glutathione S-transferases from the generalist marine gastropod, *Cyphoma gibbosum*. *Archives of Biochemistry and Biophysics*. (2008) 478(1):7-17.
19. R. M. Gould, T Oakley, J. V. Goldstone, J. C. Dugas, S. T. Brady, A. Gow. Myelin sheaths are formed with proteins that originated in vertebrate lineages. *Neuron Glia Biology*. (2008) 4(2):137-52.
18. Abad, P. et al (56 co-authors) Plant parasitism in metazoans: insight from the *Meloidogyne incognita* nematode genome. *Nature Biotechnology*. (2008) 26(8):909-15.
17. J. V. Goldstone and J. J. Stegeman. Gene Structure of the Novel Cytochrome P450 1D1 Genes in Stickleback (*Gasterosteus aculeatus*) and Medaka (*Oryzias latipes*). *Marine Environmental Research*. (2008) 66(1):19-20.
16. G. de Toledo-Silva, M. N. Siebert; I. D. Medeiros, T. Sincero, M. O. Moraes, J. V. Goldstone, A. C. D. Bainy. Cloning a new Cytochrome P450 isoform (CYP356A1) from the oyster *Crassostrea gigas*. *Marine Environmental Research*. (2008) 66(1):15-18.
15. J. V. Goldstone, H. M. H. Goldstone, A. M. Morrison, A. M. Tarrant, S. E. Kern, B. R. Woodin, and J. J. Stegeman. Cytochrome P450 1 genes in early deuterostomes (tunicates and sea urchins) and vertebrates (chicken and frog): Origin and diversification of the CYP1 gene family. *Molecular Biology and Evolution*. (2007) 24(12):2619-2631.
14. Jönsson, M. E., R. Orrego, B. R. Woodin, J V. Goldstone, and J. J. Stegeman. Basal and 3,3',4,4',5-pentachlorobiphenyl-induced expression of cytochrome P450 1A, 1B, and 1C genes in zebrafish. *Toxicology and Applied Pharmacology* (2007) 221(1):29-41.
13. Prasad, J., J. V. Goldstone, C. J. Camacho, J, J. Stegeman and S. Vajda. Ensemble modeling of substrate binding to cytochromes P450: analysis of catalytic differences between CYP1A orthologues. *Biochemistry* (2007) 46(10), 2640-2654.
12. The Sea Urchin Genome Consortium. The genome of the sea urchin *Strongylocentrotus purpuratus*. *Science* (2006) 10 Nov 314:5801, 941 - 952

11. J.V. Goldstone, A. Hamdoun, B.J. Cole, M. Howard-Ashby, D. W. Nebert, M. Scally, M. Dean, D. Epel, M.E. Hahn, J.J. Stegeman. The chemical defensome: Environmental sensing and response genes in the *Strongylocentrotus purpuratus* genome. *Developmental Biology* (2006) 300:1 366-384.
10. Verslyke, T., J. V. Goldstone, and J. J. Stegeman. Isolation and phylogeny of novel urochordate clan 3 cytochrome P450 genes. *Molecular Phylogenetics and Evolution* (2006). 40(3), 760-71.
9. Schlezinger, J. J, W. D. J. Struntz, J. V. Goldstone, J. J. Stegeman. Uncoupling of cytochrome P450 1A and stimulation of reactive oxygen species production by co-planar polychlorinated biphenyl congeners. *Aquatic Toxicology* (2006). 77(4), 422-32.
8. Godard C. A. J., J. V. Goldstone*, M. S. Said, R. L. Dickerson, B.R. Woodin, and J. J. Stegeman. The New Vertebrate CYP1C Family: Cloning of New Subfamily Members and Phylogenetic Analysis. *Biochemical and Biophysical Research Communications* (2005), 331(4), 1016-1024. *co-first author.
7. Goldstone, J. V., R. Del Vecchio, B. M. Voelker, and N. V. Blough. A multicomponent model of CDOM photobleaching. *Photochemistry and Photobiology* (2004), 80, 52-60.
6. Pullin, M. J., S. Bertilsson, J. V Goldstone, and B. M. Voelker. Photo-induced changes in dissolved organic matter bioavailability: formation of low molecular weight organic acids and other substrates. *Limnology and Oceanography* (2004), 49, 2011-2022.
5. Goldstone, J. V., M. J. Pullin, S. Bertilsson, and B. M. Voelker. Reactions of hydroxyl radical with humic substances: Bleaching, mineralization, and production of bioavailable carbon substrates. *Environmental Science and Technology* (2002), 36 (3), 364-372.
4. Goldstone, J. V. and B. M. Voelker. The chemistry of superoxide in seawater: CDOM associated sink of superoxide in coastal waters. *Environmental Science and Technology* (2000), 34 (6), 1043-1048.
3. Mahmood A., M. H. Kuchma, E. Freiberg, J. V. Goldstone., A. Davison, A. G. Jones. Functionalized tetradentate N₂S₂ ligands and their technetium-99 and rhenium complexes: synthesis, spectroscopy, and structural characterization. In *Technetium, Rhenium, and Other Metals in Chemistry and Nuclear Medicine*. Vol 5. (1998) 253-257.
2. Mahmood A., M. H. Kuchma, J. V. Goldstone, C. Morse, A. Davison, A. G. Jones. An N₂S₂ tetradentate chelate for solid-phase synthesis: evaluation in solution and solid phase and characterization of technetium-99 complexes. In *Technetium, Rhenium, and Other Metals in Chemistry and Nuclear Medicine*. Vol 5. (1998) 71-76.
1. Neale P. J., M. P. Lesser, J. J. Cullen, J. Goldstone. Detecting UV-induced inhibition of photosynthesis in Antarctic phytoplankton. *Antarctic Journal of The United States*, 27, 122-124 (1992).

PUBLISHED ABSTRACTS

Goldstone, J. V., R. Del Vecchio, B. M. Voelker, and N. V. Blough. A multicomponent model of CDOM photobleaching. Extended Abstracts of Papers of the American Chemical Society. 225:055-ENVR Part 1 (March 23 2003).

Goldstone, J. V. and B. M. Voelker. CDOM associated sink of superoxide in coastal waters. Extended Abstracts of Papers of the American Chemical Society. 216:057-ENVR Part 1 (Aug 23 1998).

INVITED LECTURES

- J. V. Goldstone. Molluscan Cytochrome P450 Evolution. 13th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Vancouver, Canada. July 2016. Invited talk. Session chair.
- J. V. Goldstone. Screening Therapies to Counteract Developmental Chlorpyrifos Intoxication. Annual NIH Countermeasures Against Chemical Threats (CounterACT) Network Research Symposium. June, 2016. University of California, Davis. Invited talk.
- J. V. Goldstone. Screening Therapies to Counteract Developmental Chlorpyrifos Intoxication. Annual NIH Countermeasures Against Chemical Threats (CounterACT) Network Research Symposium. June, 2015. New York Academy of Sciences, New York. Invited talk.
- J. V. Goldstone and J. J. Stegeman. Cytochrome P450 genes in fish. 12th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Kyoto, Japan. September 2014. Invited talk.
- Jed Goldstone and John Stegeman. Cytochrome P450 in fish, Collaborative Workshop on Aquatic Models and 21st Century Toxicology, Durham NC. May 2014. Invited talk.
- J. V. Goldstone, J. J. Stegeman. Zebrafish Cytochrome P450s. Fish and amphibian embryos as alternative models in toxicology and teratology workshop, Paris, October 2012. Invited talk.
- Jared V. Goldstone, David R. Nelson and John J. Stegeman. Origins of metazoan cytochrome P450 diversity. 11th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Torino Italy. June 2012. Invited talk.
- J. V. Goldstone. Zebrafish Cytochrome P450. Zebrafish Network Norway, Bergen Norway. Nov 2011. Invited talk.
- Jared V. Goldstone. The chemical defensome: Environmental sensing and response genes. University of Connecticut. November 2010. Invited talk.
- Jared V. Goldstone. The chemical defensome: Environmental sensing and response genes. US Coast Guard Academy. April 2010. Invited talk.
- Jared V. Goldstone. Cytochrome P450 Nomenclature. Human Genome Organization, Gene Nomenclature Across Species. October 2009. Invited talk.
- J. V. Goldstone, D. R. Nelson, and J. J. Stegeman. Metazoan Cytochrome P450 Evolution. 9th International Symposium on P450 Bioinformatics and Biotechnology. June 2008. Invited talk.
- J. J. Stegeman, J. V. Goldstone, M. Jonsson, B. R. Woodin. Cytochrome P450 genes in zebrafish. New York Academy of Sciences. November 2007. Invited talk.
- J.V. Goldstone. The chemical defensome: Environmental sensing and response genes in the genome of the sea urchin *Strongylocentrotus purpuratus*. Vox Salmonis lecture series. McMaster University, Hamilton, Ontario. Invited talk.
- J.V. Goldstone, A. Hamdoun, B.J. Cole, M. Howard-Ashby, D. W. Nebert, M. Scally, M Dean, D. Epel, M.E. Hahn, J.J. Stegeman. The chemical defensome: Environmental sensing and response genes in the *Strongylocentrotus purpuratus* genome. Developmental Biology of the Sea Urchin XVII. September 2006. Invited talk.
- Reactive oxygen species in the toxic mechanisms of dioxins and PCBs in vertebrate systems. Bowdoin College. October 2004. Invited talk.

Goldstone, J.V. Photochemistry of dissolved organic matter: The roles of reactive oxygen species in bleaching, mineralization, and the alteration of bioavailability. University of Connecticut, Avery Point. October, 2003. Invited talk.

Goldstone, J.V. Reactive oxygen in marine chemistry and toxicology: two examples. Great Lakes WATER Institute and Medical College of Wisconsin (3 invited talks). April 2003.

PAPERS PRESENTED OR CO-AUTHORED AT MEETINGS

J. Stegeman and J. Goldstone. Cytochrome P450 Evolution in Fish. 13th International Symposium on Cytochrome P450 Biodiversity and Biotechnology, Vancouver, Canada. Invited talk (Stegeman)

F. X. Mora-Zamorano, A. F. Govindarajan, J. Stegeman, J. Goldstone. Screening therapies to counteract developmental chlorpyrifos toxicity in zebrafish. Society of Toxicology Annual Meeting. New Orleans, LA. March 2016. Poster.

J. V. Goldstone, J. Wilson, P. Urban, J. Stegeman. Structural screening in zebrafish cytochrome P450s. Society of Toxicology Annual Meeting. New Orleans, LA. March 2016. Poster.

M.C. Salanga, A. Kubota, B. Lemaire, R. Harbeitner, D. Gusenleitner, S. Monti, J.J. Stegeman, J.V. Goldstone. Characterization of a pax6 mutant zebrafish. Society of Toxicology Annual Meeting. New Orleans, LA. March 2016. Poster.

J. V. Goldstone, A. Kubota, B. Lemaire, J. J. Stegeman. Transcriptomic Effects of Ortho-PCBs on Developing Zebrafish. Superfund Research Program Annual Meeting, San Juan Puerto Rico. November 2015. Poster.

J. V. Goldstone, R.C. Harbeitner, M. Salanga, A. Kubota, B. Lemaire, J.J. Stegeman. The PXR “gene battery” in zebrafish. Superfund Research Program Annual Meeting, San Juan Puerto Rico. November 2015. Poster.

J. V. Goldstone, J. Y. Wilson, D. Alsop, P. Urban. J. J. Stegeman. Structural screening in zebrafish cytochrome P450s. Annual NIH Countermeasures Against Chemical Threats (CounterACT) Network Research Symposium. June, 2015. New York Academy of Sciences, New York. Poster

J. V. Goldstone, J. Y. Wilson, D. Alsop, P. Urban. J. J. Stegeman. CYP1 substrate docking and ligand access channels. Pollutant Responses in Marine Organisms (PRIMO18) Conference. Trondheim, Norway. May 2015. Talk.

J. V. Goldstone, R.C. Harbeitner, A. Kubota, B. Lemaire, J.J. Stegeman. The PXR “gene battery” in zebrafish. Pollutant Responses in Marine Organisms (PRIMO18) Conference. Trondheim, Norway. May 2015. Talk.

A. Kubota, J. V. Goldstone, B. Lemaire, R.C. Harbeitner, R. Lille-Langøy, A Goksøy, J. J. Stegeman Differences in responses to putative PXR agonists associated with PXR alleles in zebrafish embryos. Pollutant Responses in Marine Organisms (PRIMO18) Conference. Trondheim, Norway. May 2015. Poster.

A. Kubota, J. V. Goldstone, B. Lemaire, T. Matthew, B. R. Woodin, J. J. Stegeman. Reciprocal cross-talk between PXR and AHR2 signalling in response to their putative agonists in developing zebrafish. Pollutant Responses in Marine Organisms (PRIMO18) Conference. Trondheim, Norway. May 2015. Poster.

M. Eide, P. Puntervoll, J. V. Goldstone, J. Stegeman, A. Goksøy¹ and O. A. Karlsen. Genomic survey of the Atlantic cod (*Gadus morhua*) chemical defensome reveals the absence of a promiscuous

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J. V. Goldstone, A. Kubota, B. Lemaire, J. J. Stegeman. Transcriptomic Effects of PCB153 on Developing Zebrafish. 8th International PCB Workshop. October, 2014. Woods Hole, MA. Poster.

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J. V. Goldstone. Cytochrome P450 in small model fish for drug discovery and mechanistic toxicology. Society of Environmental Toxicology and Chemistry (SETA) North Atlantic Chapter Annual Meeting. June 2014. Talk

Characterization of a full length pregnane X receptor, in vivo expression, and identification of PXR alleles in zebrafish JJ Stegeman, A Kubota, JV Goldstone, ACD Bainy, R Lille-Langøy, SI Karchner, MC Celander, ME Hahn, A Goksøy, Society of Toxicology 2014 Annual Meeting. March 2014. Poster.

JJ Stegeman, A Kubota, JV Goldstone, ACD Bainy, R Lille-Langøy, SI Karchner, MC Celander, ME Hahn, A Goksøy. Characterization of a full length pregnane X receptor, in vivo expression, and identification of PXR alleles in zebrafish, Collaborative Workshop on Aquatic Models and 21st Century Toxicology, Durham NC. May 2014. Poster.

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J. V. Goldstone, P. Urban, A. Goksøy, J. J. Stegeman. CYP and receptor homology modeling and ligand interactions in aquatic toxicology. PRIMO17, Faro Portugal, May 2013. Talk.

Jared V. Goldstone, David R. Nelson and John J. Stegeman. Origins of animal cytochrome P450 diversity. North Atlantic Chapter, Soc. Toxicology and Chemistry, May 2012. Poster.

John J. Stegeman, Phillippe Urban, Jared V. Goldstone and Denis Pompon. Substrate selectivity of heterologously expressed zebrafish CYP1C1, CYP1C2 and CYP1D1 with xenobiotic, steroid, and indicator substrates. North Atlantic Chapter, Soc. Toxicology and Chemistry, May 2012. Poster.

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J. V. Goldstone. Chemical defense genes in the sea anemone *Nematostella vectensis*. Pollutant Responses in Marine Organisms, May 2009. Poster.

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Jared V. Goldstone, Sibel Karchner, and John J. Stegeman. Putative Aldo-Keto Reductase Genes in Zebrafish (*Danio rerio*). International Symposium on Microsomes and Drug Oxidation. July 2008. Poster.

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J. V. Goldstone and John J. Stegeman CYP1A inactivation and stimulation of reactive oxygen production by planar halogenated aromatic hydrocarbons. 14th International Conference on Cytochrome P450s. June 2005. Poster.

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