

# Nathaniel L Scholz

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

94 papers	7,374 citations	46 h-index	85 g-index
97 ext. papers	8,249 ext. citations	6.4 avg, IF	5.84 L-index

#	Paper	IF	Citations
94	Defects in cardiac function precede morphological abnormalities in fish embryos exposed to polycyclic aromatic hydrocarbons. <i>Toxicology and Applied Pharmacology</i> , <b>2004</b> , 196, 191-205	4.6	611
93	Deepwater Horizon crude oil impacts the developing hearts of large predatory pelagic fish. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, E1510-8	11.5	304
92	Aryl hydrocarbon receptor-independent toxicity of weathered crude oil during fish development. <i>Environmental Health Perspectives</i> , <b>2005</b> , 113, 1755-62	8.4	290
91	Sublethal exposure to crude oil during embryonic development alters cardiac morphology and reduces aerobic capacity in adult fish. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 7086-90	11.5	253
90	Developmental toxicity of 4-ring polycyclic aromatic hydrocarbons in zebrafish is differentially dependent on AH receptor isoforms and hepatic cytochrome P4501A metabolism. <i>Toxicology and Applied Pharmacology</i> , <b>2006</b> , 217, 308-21	4.6	242
89	Crude oil impairs cardiac excitation-contraction coupling in fish. <i>Science</i> , <b>2014</b> , 343, 772-6	33.3	241
88	The synergistic toxicity of pesticide mixtures: implications for risk assessment and the conservation of endangered Pacific salmon. <i>Environmental Health Perspectives</i> , <b>2009</b> , 117, 348-53	8.4	230
87	Olfactory toxicity in fishes. <i>Aquatic Toxicology</i> , <b>2010</b> , 96, 2-26	5.1	218
86	Fish embryos are damaged by dissolved PAHs, not oil particles. <i>Aquatic Toxicology</i> , <b>2008</b> , 88, 121-7	5.1	214
85	Cardiac arrhythmia is the primary response of embryonic Pacific herring ( <i>Clupea pallasii</i> ) exposed to crude oil during weathering. <i>Environmental Science &amp; Technology</i> , <b>2009</b> , 43, 201-7	10.3	180
84	Neural defects and cardiac arrhythmia in fish larvae following embryonic exposure to 2,2',4,4'-tetrabromodiphenyl ether (PBDE 47). <i>Aquatic Toxicology</i> , <b>2007</b> , 82, 296-307	5.1	180
83	Comparative thresholds for acetylcholinesterase inhibition and behavioral impairment in coho salmon exposed to chlorpyrifos. <i>Environmental Toxicology and Chemistry</i> , <b>2005</b> , 24, 136-45	3.8	169
82	Acute embryonic or juvenile exposure to Deepwater Horizon crude oil impairs the swimming performance of mahi-mahi ( <i>Coryphaena hippurus</i> ). <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 7053-61	10.3	167
81	Diazinon disrupts antipredator and homing behaviors in chinook salmon ( <i>Oncorhynchus tshawytscha</i> ). <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , <b>2000</b> , 57, 1911-1918	2.4	162
80	Exxon Valdez to Deepwater Horizon: comparable toxicity of both crude oils to fish early life stages. <i>Aquatic Toxicology</i> , <b>2013</b> , 142-143, 303-16	5.1	151
79	The developmental neurotoxicity of fipronil: notochord degeneration and locomotor defects in zebrafish embryos and larvae. <i>Toxicological Sciences</i> , <b>2006</b> , 92, 270-8	4.4	143
78	A sensory system at the interface between urban stormwater runoff and salmon survival. <i>Environmental Science &amp; Technology</i> , <b>2007</b> , 41, 2998-3004	10.3	142

77	A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon. <i>Science</i> , <b>2021</b> , 371, 185-189	33.3	140
76	Cardiac toxicity of 5-ring polycyclic aromatic hydrocarbons is differentially dependent on the aryl hydrocarbon receptor 2 isoform during zebrafish development. <i>Toxicology and Applied Pharmacology</i> , <b>2011</b> , 257, 242-9	4.6	135
75	The effects of weathering and chemical dispersion on Deepwater Horizon crude oil toxicity to mahi-mahi ( <i>Coryphaena hippurus</i> ) early life stages. <i>Science of the Total Environment</i> , <b>2016</b> , 543, 644-651	10.2	129
74	Sublethal effects of copper on coho salmon: impacts on nonoverlapping receptor pathways in the peripheral olfactory nervous system. <i>Environmental Toxicology and Chemistry</i> , <b>2003</b> , 22, 2266-74	3.8	129
73	Effects of the synthetic estrogen, 17alpha-ethinylestradiol, on aggression and courtship behavior in male zebrafish ( <i>Danio rerio</i> ). <i>Aquatic Toxicology</i> , <b>2009</b> , 91, 346-54	5.1	127
72	Chemical orientation of lobsters, <i>homarus americanus</i> , in turbulent odor plumes. <i>Journal of Chemical Ecology</i> , <b>1991</b> , 17, 1293-307	2.7	127
71	Unexpectedly high mortality in Pacific herring embryos exposed to the 2007 Cosco Busan oil spill in San Francisco Bay. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, E51-8	11.5	111
70	Very low embryonic crude oil exposures cause lasting cardiac defects in salmon and herring. <i>Scientific Reports</i> , <b>2015</b> , 5, 13499	4.9	101
69	A fish of many scales: extrapolating sublethal pesticide exposures to the productivity of wild salmon populations <b>2009</b> , 19, 2004-15		93
68	Dissolved copper triggers cell death in the peripheral mechanosensory system of larval fish. <i>Environmental Toxicology and Chemistry</i> , <b>2006</b> , 25, 597-603	3.8	89
67	Chemosensory deprivation in juvenile coho salmon exposed to dissolved copper under varying water chemistry conditions. <i>Environmental Science &amp; Technology</i> , <b>2008</b> , 42, 1352-8	10.3	86
66	Odor-evoked field potentials as indicators of sublethal neurotoxicity in juvenile coho salmon ( <i>Oncorhynchus kisutch</i> ) exposed to copper, chlorpyrifos, or esfenvalerate. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , <b>2004</b> , 61, 404-413	2.4	85
65	The influence of heart developmental anatomy on cardiotoxicity-based adverse outcome pathways in fish. <i>Aquatic Toxicology</i> , <b>2016</b> , 177, 515-25	5.1	84
64	Morphological abnormalities and sensorimotor deficits in larval fish exposed to dissolved saxitoxin. <i>Aquatic Toxicology</i> , <b>2004</b> , 66, 159-70	5.1	84
63	A Novel Cardiotoxic Mechanism for a Pervasive Global Pollutant. <i>Scientific Reports</i> , <b>2017</b> , 7, 41476	4.9	80
62	The NO/cGMP pathway and the development of neural networks in postembryonic lobsters. <i>Journal of Neurobiology</i> , <b>1998</b> , 34, 208-26		80
61	Corresponding morphological and molecular indicators of crude oil toxicity to the developing hearts of mahi mahi. <i>Scientific Reports</i> , <b>2015</b> , 5, 17326	4.9	77
60	Using High-Resolution Mass Spectrometry to Identify Organic Contaminants Linked to Urban Stormwater Mortality Syndrome in Coho Salmon. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 10317-10327	10.3	75

59	Low-level copper exposures increase visibility and vulnerability of juvenile coho salmon to cutthroat trout predators <b>2012</b> , 22, 1460-71		71
58	Recurrent die-offs of adult coho salmon returning to spawn in Puget Sound lowland urban streams. <i>PLoS ONE</i> , <b>2011</b> , 6, e28013	3.7	64
57	Novel adverse outcome pathways revealed by chemical genetics in a developing marine fish. <i>ELife</i> , <b>2017</b> , 6,	8.9	62
56	Soil bioretention protects juvenile salmon and their prey from the toxic impacts of urban stormwater runoff. <i>Chemosphere</i> , <b>2015</b> , 132, 213-9	8.4	60
55	Development of suspect and non-target screening methods for detection of organic contaminants in highway runoff and fish tissue with high-resolution time-of-flight mass spectrometry. <i>Environmental Sciences: Processes and Impacts</i> , <b>2017</b> , 19, 1185-1196	4.3	59
54	A Perspective on Modern Pesticides, Pelagic Fish Declines, and Unknown Ecological Resilience in Highly Managed Ecosystems. <i>BioScience</i> , <b>2012</b> , 62, 428-434	5.7	58
53	Pyrethroid insecticides in urban salmon streams of the Pacific Northwest. <i>Environmental Pollution</i> , <b>2011</b> , 159, 3051-6	9.3	56
52	Pesticides, aquatic food webs, and the conservation of Pacific salmon. <i>Frontiers in Ecology and the Environment</i> , <b>2010</b> , 8, 475-482	5.5	53
51	Oil spills and fish health: exposing the heart of the matter. <i>Journal of Exposure Science and Environmental Epidemiology</i> , <b>2011</b> , 21, 3-4	6.7	50
50	Molecular underpinnings of motor pattern generation: differential targeting of shal and shaker in the pyloric motor system. <i>Journal of Neuroscience</i> , <b>2000</b> , 20, 6619-30	6.6	49
49	Elevated temperatures increase the toxicity of pesticide mixtures to juvenile coho salmon. <i>Aquatic Toxicology</i> , <b>2014</b> , 146, 38-44	5.1	48
48	Copper-induced olfactory toxicity in salmon and steelhead: extrapolation across species and rearing environments. <i>Aquatic Toxicology</i> , <b>2011</b> , 101, 295-7	5.1	46
47	Zebrafish and clean water technology: assessing soil bioretention as a protective treatment for toxic urban runoff. <i>Science of the Total Environment</i> , <b>2014</b> , 500-501, 173-80	10.2	45
46	Dissolved saxitoxin causes transient inhibition of sensorimotor function in larval Pacific herring ( <i>Clupea harengus pallasii</i> ). <i>Marine Biology</i> , <b>2005</b> , 147, 1393-1402	2.5	45
45	Life Histories, Salinity Zones, and Sublethal Contributions of Contaminants to Pelagic Fish Declines Illustrated with a Case Study of San Francisco Estuary, California, USA. <i>Estuaries and Coasts</i> , <b>2012</b> , 35, 603-621	2.8	44
44	Estimating the future decline of wild coho salmon populations resulting from early spawner die-offs in urbanizing watersheds of the Pacific Northwest, USA. <i>Integrated Environmental Assessment and Management</i> , <b>2011</b> , 7, 648-56	2.5	43
43	Neural network partitioning by NO and cGMP. <i>Journal of Neuroscience</i> , <b>2001</b> , 21, 1610-8	6.6	43
42	Dose-additive inhibition of chinook salmon acetylcholinesterase activity by mixtures of organophosphate and carbamate insecticides. <i>Environmental Toxicology and Chemistry</i> , <b>2006</b> , 25, 1200-7 <sup>3.8</sup>		42

41	Potent phototoxicity of marine bunker oil to translucent herring embryos after prolonged weathering. <i>PLoS ONE</i> , <b>2012</b> , 7, e30116	3.7	41
40	Effects of water hardness, alkalinity, and dissolved organic carbon on the toxicity of copper to the lateral line of developing fish. <i>Environmental Toxicology and Chemistry</i> , <b>2009</b> , 28, 1455-61	3.8	40
39	Transcriptional impact of organophosphate and metal mixtures on olfaction: copper dominates the chlorpyrifos-induced response in adult zebrafish. <i>Aquatic Toxicology</i> , <b>2011</b> , 102, 205-15	5.1	38
38	Nitric oxide and peptide neurohormones activate cGMP synthesis in the crab stomatogastric nervous system. <i>Journal of Neuroscience</i> , <b>1996</b> , 16, 1614-22	6.6	37
37	Coho salmon spawner mortality in western US urban watersheds: bioinfiltration prevents lethal storm water impacts. <i>Journal of Applied Ecology</i> , <b>2016</b> , 53, 398-407	5.8	36
36	Natural sunlight and residual fuel oils are an acutely lethal combination for fish embryos. <i>Aquatic Toxicology</i> , <b>2010</b> , 99, 56-64	5.1	36
35	Expression of nitric oxide synthase and nitric oxide-sensitive guanylate cyclase in the crustacean cardiac ganglion. <i>Journal of Comparative Neurology</i> , <b>2002</b> , 454, 158-67	3.4	33
34	Roads to ruin: conservation threats to a sentinel species across an urban gradient <b>2017</b> , 27, 2382-2396		32
33	Landscape ecotoxicology of coho salmon spawner mortality in urban streams. <i>PLoS ONE</i> , <b>2011</b> , 6, e23424	3.7	32
32	Confirmation of Stormwater Bioretention Treatment Effectiveness Using Molecular Indicators of Cardiovascular Toxicity in Developing Fish. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 1561-9	10.3	28
31	Behavioral impairment and increased predation mortality in cutthroat trout exposed to carbaryl. <i>Marine Ecology - Progress Series</i> , <b>2007</b> , 329, 1-11	2.6	27
30	Interspecies variation in the susceptibility of adult Pacific salmon to toxic urban stormwater runoff. <i>Environmental Pollution</i> , <b>2018</b> , 238, 196-203	9.3	26
29	Interactive neurobehavioral toxicity of diazinon, malathion, and ethoprop to juvenile coho salmon. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 2925-31	10.3	26
28	Embryonic Crude Oil Exposure Impairs Growth and Lipid Allocation in a Keystone Arctic Forage Fish. <i>IScience</i> , <b>2019</b> , 19, 1101-1113	6.1	24
27	Identification of nitric oxide-sensitive and -insensitive forms of cytoplasmic guanylate cyclase. <i>Journal of Neurochemistry</i> , <b>1997</b> , 69, 1650-60	6	20
26	A modeled comparison of direct and food web-mediated impacts of common pesticides on Pacific salmon. <i>PLoS ONE</i> , <b>2014</b> , 9, e92436	3.7	17
25	Predicted transport of pyrethroid insecticides from an urban landscape to surface water. <i>Environmental Toxicology and Chemistry</i> , <b>2013</b> , 32, 2469-77	3.8	17
24	Severe Coal Tar Sealcoat Runoff Toxicity to Fish Is Prevented by Bioretention Filtration. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 1570-8	10.3	16

23	In response: scaling polycyclic aromatic hydrocarbon toxicity to fish early life stages: a governmental perspective. <i>Environmental Toxicology and Chemistry</i> , <b>2015</b> , 34, 459-61	3.8	13
22	Barging Effects on Sensory Systems of Chinook Salmon Smolts. <i>Transactions of the American Fisheries Society</i> , <b>2009</b> , 138, 777-789	1.7	13
21	An urban stormwater runoff mortality syndrome in juvenile coho salmon. <i>Aquatic Toxicology</i> , <b>2019</b> , 214, 105231	5.1	12
20	The challenge: "bridging the gap" with fish: advances in assessing exposure and effects across biological scales. <i>Environmental Toxicology and Chemistry</i> , <b>2015</b> , 34, 459	3.8	11
19	Chapter XI Invertebrate models for studying NO-mediated signaling. <i>Handbook of Chemical Neuroanatomy</i> , <b>2000</b> , 17, 417-441		11
18	Treading Water: Tire Wear Particle Leachate Recreates an Urban Runoff Mortality Syndrome in Coho but Not Chum Salmon. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 11767-11774	10.3	11
17	Environmental Pollution and the Fish Heart. <i>Fish Physiology</i> , <b>2017</b> , 36, 373-433	2	10
16	Evaluating the Effects of Forestry Herbicides on Fish Development Using Rapid Phenotypic Screens. <i>North American Journal of Fisheries Management</i> , <b>2009</b> , 29, 975-984	1.1	10
15	Case Study: The 2010 Deepwater Horizon Oil Spill and Its Environmental Developmental Impacts <b>2018</b> , 235-283		10
14	Sublethal neurotoxicity of organophosphate insecticides to juvenile coho salmon. <i>Aquatic Toxicology</i> , <b>2020</b> , 221, 105424	5.1	8
13	Crude oil cardiotoxicity to red drum embryos is independent of oil dispersion energy. <i>Chemosphere</i> , <b>2018</b> , 213, 205-214	8.4	8
12	Legacy habitat contamination as a limiting factor for Chinook salmon recovery in the Willamette Basin, Oregon, USA. <i>PLoS ONE</i> , <b>2019</b> , 14, e0214399	3.7	7
11	NO/cGMP Signaling and the Flexible Organization of Motor Behavior in Crustaceans. <i>American Zoologist</i> , <b>2001</b> , 41, 292-303		6
10	NO/cGMP Signaling and the Flexible Organization of Motor Behavior in Crustaceans1. <i>American Zoologist</i> , <b>2001</b> , 41, 292-303		5
9	Cardiac remodeling in response to embryonic crude oil exposure involves unconventional NKX family members and innate immunity genes. <i>Journal of Experimental Biology</i> , <b>2019</b> , 222,	3	5
8	Urban stormwater and crude oil injury pathways converge on the developing heart of a shore-spawning marine forage fish. <i>Aquatic Toxicology</i> , <b>2020</b> , 229, 105654	5.1	3
7	The electro-olfactogram <b>2005</b> ,		3
6	Ecotoxicological Risk of Mixtures <b>2015</b> , 441-462		2

5	Chemical pollution149-177		2
4	The Extension of Molecular and Computational Information to Risk Assessment and Regulatory Decision Making* <b>2006</b> , 151-180		1
3	Low-level embryonic crude oil exposure disrupts ventricular ballooning and subsequent trabeculation in Pacific herring. <i>Aquatic Toxicology</i> , <b>2021</b> , 235, 105810	5.1	1
2	Review of and Recommendations for Monitoring Contaminants and their Effects in the San Francisco BayDelta. <i>San Francisco Estuary and Watershed Science</i> , <b>2019</b> , 17,	1.4	1
1	Decreased Growth Rate Associated with Tissue Contaminants in Juvenile Chinook Salmon Out-Migrating through an Industrial Waterway. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 9968-9978	10.3	1