

# Gretchen E Hofmann

## List of Publications by Year in descending order

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79  
papers

11,257  
citations

61857

43  
h-index

69108

77  
g-index

80  
all docs

80  
docs citations

80  
times ranked

9696  
citing authors

#	ARTICLE	IF	CITATIONS
1	HEAT-SHOCK PROTEINS, MOLECULAR CHAPERONES, AND THE STRESS RESPONSE: Evolutionary and Ecological Physiology. Annual Review of Physiology, 1999, 61, 243-282.	5.6	3,624
2	High-Frequency Dynamics of Ocean pH: A Multi-Ecosystem Comparison. PLoS ONE, 2011, 6, e28983.	1.1	782
3	Climate Change and Latitudinal Patterns of Intertidal Thermal Stress. Science, 2002, 298, 1015-1017.	6.0	603
4	Living in the Now: Physiological Mechanisms to Tolerate a Rapidly Changing Environment. Annual Review of Physiology, 2010, 72, 127-145.	5.6	497
5	Microhabitats, Thermal Heterogeneity, and Patterns of Physiological Stress in the Rocky Intertidal Zone. Biological Bulletin, 2001, 201, 374-384.	0.7	447
6	The Effect of Ocean Acidification on Calcifying Organisms in Marine Ecosystems: An Organism-to-Ecosystem Perspective. Annual Review of Ecology, Evolution, and Systematics, 2010, 41, 127-147.	3.8	434
7	MOSAIC PATTERNS OF THERMAL STRESS IN THE ROCKY INTERTIDAL ZONE: IMPLICATIONS FOR CLIMATE CHANGE. Ecological Monographs, 2006, 76, 461-479.	2.4	392
8	Transcriptomic response of sea urchin larvae <i>Strongylocentrotus purpuratus</i> to CO <sub>2</sub> -driven seawater acidification. Journal of Experimental Biology, 2009, 212, 2579-2594.	0.8	276
9	Adjusting the thermostat: the threshold induction temperature for the heat-shock response in intertidal mussels (genus <i>Mytilus</i> ) changes as a function of thermal history. Journal of Experimental Biology, 2001, 204, 3571-3579.	0.8	261
10	Natural variation and the capacity to adapt to ocean acidification in the keystone sea urchin <i>Strongylocentrotus purpuratus</i> . Global Change Biology, 2013, 19, 2536-2546.	4.2	177
11	Adaptation and the physiology of ocean acidification. Functional Ecology, 2013, 27, 980-990.	1.7	153
12	Defining the limits of physiological plasticity: how gene expression can assess and predict the consequences of ocean change. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1733-1745.	1.8	145
13	Transcriptomic responses to ocean acidification in larval sea urchins from a naturally variable pH environment. Molecular Ecology, 2013, 22, 1609-1625.	2.0	118
14	Interacting environmental mosaics drive geographic variation in mussel performance and predation vulnerability. Ecology Letters, 2016, 19, 771-779.	3.0	118
15	Regulation of heat shock genes in isolated hepatocytes from an Antarctic fish, <i>Trematomus bernacchii</i> . Journal of Experimental Biology, 2004, 207, 3649-3656.	0.8	115
16	Patterns of Hsp gene expression in ectothermic marine organisms on small to large biogeographic scales. Integrative and Comparative Biology, 2005, 45, 247-255.	0.9	115
17	Predicted impact of ocean acidification on a marine invertebrate: elevated CO <sub>2</sub> alters response to thermal stress in sea urchin larvae. Marine Biology, 2009, 156, 439-446.	0.7	115
18	Constitutive roles for inducible genes: evidence for the alteration in expression of the inducible hsp70 gene in Antarctic notothenioid fishes. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2004, 287, R429-R436.	0.9	106

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19	The ocean acidification seascape and its relationship to the performance of calcifying marine invertebrates: Laboratory experiments on the development of urchin larvae framed by environmentally-relevant pCO <sub>2</sub> /pH. <i>Journal of Experimental Marine Biology and Ecology</i> , 2011, 400, 288-295.	0.7	105
20	Temperature and CO <sub>2</sub> additively regulate physiology, morphology and genomic responses of larval sea urchins, <i>Strongylocentrotus purpuratus</i> . <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013, 280, 20130155.	1.2	98
21	Ecologically Relevant Variation in Induction and Function of Heat Shock Proteins in Marine Organisms. <i>American Zoologist</i> , 1999, 39, 889-900.	0.7	97
22	A laboratory-based, experimental system for the study of ocean acidification effects on marine invertebrate larvae. <i>Limnology and Oceanography: Methods</i> , 2010, 8, 441-452.	1.0	89
23	Ocean pH time-series and drivers of variability along the northern Channel Islands, California, USA. <i>Limnology and Oceanography</i> , 2016, 61, 953-968.	1.6	84
24	Thermal history-dependent expression of the hsp70 gene in purple sea urchins: Biogeographic patterns and the effect of temperature acclimation. <i>Journal of Experimental Marine Biology and Ecology</i> , 2005, 327, 134-143.	0.7	81
25	Thermotolerance and heat-shock protein expression in Northeastern Pacific <i>Nucella</i> species with different biogeographical ranges. <i>Marine Biology</i> , 2005, 146, 985-993.	0.7	79
26	Effect of pH on Gene Expression and Thermal Tolerance of Early Life History Stages of Red Abalone ( <i>Haliotis rufescens</i> ). <i>Journal of Shellfish Research</i> , 2010, 29, 429-439.	0.3	79
27	Some like it hot, some like it cold: the heat shock response is found in New Zealand but not Antarctic notothenioid fishes. <i>Journal of Experimental Marine Biology and Ecology</i> , 2005, 316, 79-89.	0.7	77
28	Molecular Chaperones in Ectothermic Marine Animals: Biochemical Function and Gene Expression. <i>Integrative and Comparative Biology</i> , 2002, 42, 808-814.	0.9	76
29	Thermal acclimation changes DNA-binding activity of heat shock factor 1 (HSF1) in the goby <i>Gillichthys mirabilis</i> : implications for plasticity in the heat-shock response in natural populations. <i>Journal of Experimental Biology</i> , 2002, 205, 3231-3240.	0.8	75
30	Patterns of Variation in Levels of Hsp70 in Natural Rocky Shore Populations from Microscales to Mesoscales. <i>Integrative and Comparative Biology</i> , 2002, 42, 815-824.	0.9	70
31	Long-term, high frequency in situ measurements of intertidal mussel bed temperatures using biomimetic sensors. <i>Scientific Data</i> , 2016, 3, 160087.	2.4	69
32	Responses of the Metabolism of the Larvae of <i>Pocillopora damicornis</i> to Ocean Acidification and Warming. <i>PLoS ONE</i> , 2014, 9, e96172.	1.1	68
33	Ocean acidification promotes broad transcriptomic responses in marine metazoans: a literature survey. <i>Frontiers in Zoology</i> , 2020, 17, 7.	0.9	68
34	Transcriptomics reveal transgenerational effects in purple sea urchin embryos: Adult acclimation to upwelling conditions alters the response of their progeny to differential pCO <sub>2</sub> levels. <i>Molecular Ecology</i> , 2018, 27, 1120-1137.	2.0	67
35	Interactive effects of elevated temperature and pCO <sub>2</sub> on early-life-history stages of the giant kelp <i>Macrocystis pyrifera</i> . <i>Journal of Experimental Marine Biology and Ecology</i> , 2014, 457, 51-58.	0.7	64
36	Marine macrophysiology: Studying physiological variation across large spatial scales in marine systems. <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2007, 147, 821-827.	0.8	62

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37	Transcriptomic responses to seawater acidification among sea urchin populations inhabiting a natural pH mosaic. <i>Molecular Ecology</i> , 2017, 26, 2257-2275.	2.0	62
38	Transcriptome profiles link environmental variation and physiological response of <i>Mytilus californianus</i> between Pacific tides. <i>Functional Ecology</i> , 2012, 26, 144-155.	1.7	61
39	Early developmental gene regulation in <i>Strongylocentrotus purpuratus</i> embryos in response to elevated CO <sub>2</sub> seawater conditions. <i>Journal of Experimental Biology</i> , 2012, 215, 2445-2454.	0.8	57
40	Near-shore Antarctic pH variability has implications for the design of ocean acidification experiments. <i>Scientific Reports</i> , 2015, 5, .	1.6	53
41	Genomics-fueled approaches to current challenges in marine ecology. <i>Trends in Ecology and Evolution</i> , 2005, 20, 305-311.	4.2	52
42	Magnitude and Duration of Thermal Stress Determine Kinetics of hsp Gene Regulation in the Goby <i>Gillichthys mirabilis</i> . <i>Physiological and Biochemical Zoology</i> , 2004, 77, 570-581.	0.6	48
43	Thermal tolerance of <i>Strongylocentrotus purpuratus</i> early life history stages: mortality, stress-induced gene expression and biogeographic patterns. <i>Marine Biology</i> , 2010, 157, 2677-2687.	0.7	48
44	Antarctic echinoids and climate change: a major impact on the brooding forms. <i>Global Change Biology</i> , 2011, 17, 734-744.	4.2	45
45	Transcriptomic response of the Antarctic pteropod <i>Limacina helicina antarctica</i> to ocean acidification. <i>BMC Genomics</i> , 2017, 18, 812.	1.2	43
46	Differing patterns of hsp70 gene expression in invasive and native kelp species: evidence for acclimation-induced variation. <i>Journal of Applied Phycology</i> , 2008, 20, 915-924.	1.5	42
47	Turning up the heat: The effects of thermal acclimation on the kinetics of hsp70 gene expression in the eurythermal goby, <i>Gillichthys mirabilis</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2006, 143, 435-446.	0.8	41
48	Expression of 70 kDa heat shock proteins in antarctic and New Zealand notothenioid fish. <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2000, 125, 229-238.	0.8	40
49	Development Under Elevated pCO <sub>2</sub> Conditions Does Not Affect Lipid Utilization and Protein Content in Early Life-History Stages of the Purple Sea Urchin, <i>Strongylocentrotus purpuratus</i> . <i>Biological Bulletin</i> , 2012, 223, 312-327.	0.7	40
50	Comparison of Hsc70 orthologs from polar and temperate notothenioid fishes: differences in prevention of aggregation and refolding of denatured proteins. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2005, 288, R1195-R1202.	0.9	39
51	Signals of resilience to ocean change: high thermal tolerance of early stage Antarctic sea urchins ( <i>Sterechinus neumayeri</i> ) reared under present-day and future pCO <sub>2</sub> and temperature. <i>Polar Biology</i> , 2014, 37, 967-980.	0.5	38
52	Physiological plasticity and local adaptation to elevated pCO <sub>2</sub> in calcareous algae: an ontogenetic and geographic approach. <i>Evolutionary Applications</i> , 2016, 9, 1043-1053.	1.5	38
53	Variability of Seawater Chemistry in a Kelp Forest Environment Is Linked to in situ Transgenerational Effects in the Purple Sea Urchin, <i>Strongylocentrotus purpuratus</i> . <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	38
54	New Tools to Meet New Challenges: Emerging Technologies for Managing Marine Ecosystems for Resilience. <i>BioScience</i> , 2008, 58, 43-52.	2.2	37

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55	Transgenerational effects in an ecological context: Conditioning of adult sea urchins to upwelling conditions alters maternal provisioning and progeny phenotype. <i>Journal of Experimental Marine Biology and Ecology</i> , 2019, 517, 65-77.	0.7	37
56	Ocean Acidification and Fertilization in the Antarctic Sea Urchin <i>Sterechinus neumayeri</i> : the Importance of Polyspermy. <i>Environmental Science &amp; Technology</i> , 2014, 48, 713-722.	4.6	34
57	Growth Attenuation with Developmental Schedule Progression in Embryos and Early Larvae of <i>Sterechinus neumayeri</i> Raised under Elevated CO <sub>2</sub> . <i>PLoS ONE</i> , 2013, 8, e52448.	1.1	33
58	High pCO <sub>2</sub> affects body size, but not gene expression in larvae of the California mussel ( <i>Mytilus</i> ) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50 6	1.2	32
59	Lipid consumption in coral larvae differs among sites: a consideration of environmental history in a global ocean change scenario. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20162825.	1.2	32
60	Biogeographic variation in <i>Mytilus galloprovincialis</i> heat shock gene expression across the eastern Pacific range. <i>Journal of Experimental Marine Biology and Ecology</i> , 2009, 376, 37-42.	0.7	30
61	High-frequency observations of pH under Antarctic sea ice in the southern Ross Sea. <i>Antarctic Science</i> , 2011, 23, 607-613.	0.5	30
62	Beyond the benchtop and the benthos: Dataset management planning and design for time series of ocean carbonate chemistry associated with Durafet <sup>®</sup> -based pH sensors. <i>Ecological Informatics</i> , 2016, 36, 209-220.	2.3	29
63	Effects of temperature and pCO <sub>2</sub> on lipid use and biological parameters of planulae of <i>Pocillopora damicornis</i> . <i>Journal of Experimental Marine Biology and Ecology</i> , 2015, 473, 43-52.	0.7	27
64	Abiotic versus Biotic Drivers of Ocean pH Variation under Fast Sea Ice in McMurdo Sound, Antarctica. <i>PLoS ONE</i> , 2014, 9, e107239.	1.1	26
65	Sensitivity of sea urchin fertilization to pH varies across a natural pH mosaic. <i>Ecology and Evolution</i> , 2017, 7, 1737-1750.	0.8	26
66	Changes in Genome-Wide Methylation and Gene Expression in Response to Future pCO <sub>2</sub> Extremes in the Antarctic Pteropod <i>Limacina helicina antarctica</i> . <i>Frontiers in Marine Science</i> , 2020, 6, .	1.2	26
67	Temperature interactions of the molecular chaperone Hsc70 from the eurythermal marine goby <i>Gillichthys mirabilis</i> . <i>Journal of Experimental Biology</i> , 2001, 204, 2675-2682.	0.8	26
68	Examining the Role of DNA Methylation in Transcriptomic Plasticity of Early Stage Sea Urchins: Developmental and Maternal Effects in a Kelp Forest Herbivore. <i>Frontiers in Marine Science</i> , 2020, 7, .	1.2	25
69	Spatial and temporal variation in distribution and protein ubiquitination for <i>Mytilus</i> congeners in the California hybrid zone. <i>Marine Biology</i> , 2008, 154, 1067-1075.	0.7	21
70	Thermal ecophysiology of gametophytes cultured from invasive <i>Undaria pinnatifida</i> (Harvey) Suringar in coastal California harbors. <i>Journal of Experimental Marine Biology and Ecology</i> , 2008, 367, 164-173.	0.7	21
71	Host and Symbionts in <i>Pocillopora damicornis</i> Larvae Display Different Transcriptomic Responses to Ocean Acidification and Warming. <i>Frontiers in Marine Science</i> , 2018, 5, .	1.2	20
72	Additive effects of pCO <sub>2</sub> and temperature on respiration rates of the Antarctic pteropod <i>Limacina helicina antarctica</i> . , 2017, 5, cox064.		19

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73	Ocean acidification research in the "post-genomic" era: Roadmaps from the purple sea urchin <i>Strongylocentrotus purpuratus</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2015, 185, 33-42.	0.8	18
74	The molecular chaperone Hsc70 from a eurythermal marine goby exhibits temperature insensitivity during luciferase refolding assays. <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2004, 138, 1-7.	0.8	11
75	Morphological and genetic variation in <i>Egria menziesii</i> over a latitudinal gradient. <i>Botanica Marina</i> , 2007, 50, 159-170.	0.6	11
76	Gene expression patterns of red sea urchins ( <i>Mesocentrotus franciscanus</i> ) exposed to different combinations of temperature and pCO <sub>2</sub> during early development. <i>BMC Genomics</i> , 2021, 22, 32.	1.2	6
77	Temperature differentially affects adenosine triphosphatase activity in Hsc70 orthologs from Antarctic and New Zealand notothenioid fishes. <i>Cell Stress and Chaperones</i> , 2005, 10, 104.	1.2	3
78	Differing patterns of hsp70 gene expression in invasive and native kelp species: evidence for acclimation-induced variation. , 2007, , 465-474.		1
79	Politics: The long shadow of the shutdown. <i>Nature</i> , 2013, 502, 431-432.	13.7	1