Virginia M Weis

List of Publications by Citations

106 papers	5,492 citations	40 h-index	72 g-index
122 ext. papers	6,728 ext. citations	4.3 avg, IF	6.13 L-index

#	Paper	IF	Citations
106	Cellular mechanisms of Cnidarian bleaching: stress causes the collapse of symbiosis. *Journal of Experimental Biology*, **2008**, 211, 3059-66	3	544
105	Cell biology of cnidarian-dinoflagellate symbiosis. *Microbiology and Molecular Biology Reviews*, **2012**, 76, 229-61	13.2	496
104	The genome of Aiptasia, a sea anemone model for coral symbiosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 11893-8	11.5	244
103	Cell biology in model systems as the key to understanding corals. *Trends in Ecology and Evolution*, **2008**, 23, 369-76	10.9	216
102	Effects of morphology and water motion on carbon delivery and productivity in the reef coral, Pocillopora damicornis (Linnaeus): Diffusion barriers, inorganic carbon limitation, and biochemical plasticity. *Journal of Experimental Marine Biology and Ecology*, **1994**, 178, 153-179	2.1	195
101	Lectin/glycan interactions play a role in recognition in a coral/dinoflagellate symbiosis. *Cellular Microbiology*, **2006**, 8, 1985-93	3.9	152
100	Nitric oxide and cnidarian bleaching: an eviction notice mediates breakdown of a symbiosis. *Journal of Experimental Biology*, **2006**, 209, 2804-10	3	130
99	Comparative genomics explains the evolutionary success of reef-forming corals. *ELife*, **2016**, 5,	8.9	126
98	Host-symbiont specificity during onset of symbiosis between the dinoflagellates Symbiodinium spp. and planula larvae of the scleractinian coral Fungia scutaria. *Coral Reefs*, **2001**, 20, 301-308	4.2	125
97	A □CO2 supply□ mechanism in zooxanthellate cnidarians: role of carbonic anhydrase. *Marine Biology*, **1989**, 100, 195-202	2.5	120
96	Apoptosis and autophagy as mechanisms of dinoflagellate symbiont release during cnidarian bleaching: every which way you lose. *Proceedings of the Royal Society B: Biological Sciences*, **2007**, 274, 3079-85	4.4	115
95	Generation and analysis of transcriptomic resources for a model system on the rise: the sea anemone Aiptasia pallida and its dinoflagellate endosymbiont. *BMC Genomics*, **2009**, 10, 258	4.5	113
94	Late Larval Development and Onset of Symbiosis in the Scleractinian Coral Fungia scutaria. *Biological Bulletin*, **1999**, 196, 70-9	1.5	113
93	Transcriptome analysis of a cnidarian-dinoflagellate mutualism reveals complex modulation of host gene expression. *BMC Genomics*, **2006**, 7, 23	4.5	111
92	Optimal nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 13194-13199	11.5	103
91	Apoptosis as a post-phagocytic winnowing mechanism in a coral-dinoflagellate mutualism. *Environmental Microbiology*, **2009**, 11, 268-76	5.2	79
90	Distinct ITS types of Symbiodinium in Clade C correlate with cnidarian/dinoflagellate specificity during onset of symbiosis. *Marine Ecology - Progress Series*, **2004**, 275, 97-102	2.6	71

89	A peroxidase related to the mammalian antimicrobial protein myeloperoxidase in the Euprymna-Vibrio mutualism. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 13683-8	11.5	69
88	Temporal and spatial infection dynamics indicate recognition events in the early hours of a dinoflagellate/coral symbiosis. *Marine Biology*, **2006**, 149, 713-719	2.5	67
87	Study of cnidarian-algal symbiosis in the "omics" age. *Biological Bulletin*, **2012**, 223, 44-65	1.5	64
86	Carbonic anhydrase expression and synthesis in the sea anemone Anthopleura elegantissima are enhanced by the presence of dinoflagellate symbionts. *Physiological and Biochemical Zoology*, **1999**, 72, 307-16	2	64
85	Effect of dissolved inorganic carbon concentration on the photosynthesis of the symbiotic sea anemone Aiptasia pulchella Carlgren: Role of carbonic anhydrase. *Journal of Experimental Marine Biology and Ecology*, **1993**, 174, 209-225	2.1	62
84	Symbiosis induces widespread changes in the proteome of the model cnidarian Aiptasia. *Cellular Microbiology*, **2016**, 18, 1009-23	3.9	62
83	Physiology. What determines coral health?. *Science*, **2009**, 324, 1153-5	33.3	57
82	Uptake and partitioning of copper and cadmium in the coral Pocillopora damicornis. *Aquatic Toxicology*, **2007**, 85, 48-56	5.1	56
81	Regulation of cnidarian-dinoflagellate mutualisms: Evidence that activation of a host TGF innate immune pathway promotes tolerance of the symbiont. *Developmental and Comparative Immunology* , **2012**, 38, 525-37	3.2	53
80	Feeding behavior and acquisition of zooxanthellae by planula larvae of the sea anemone Anthopleura elegantissima. *Marine Biology*, **2002**, 140, 471-478	2.5	52
79	Three party symbiosis: acoelomorph worms, corals and unicellular algal symbionts in Eilat (Red Sea). *Marine Biology*, **2007**, 151, 1215-1223	2.5	51
78	Differential protein profiles reflect the different lifestyles of symbiotic and aposymbiotic Anthopleura elegantissima, a sea anemone from temperate waters. *Journal of Experimental Biology* , **1996**, 199, 883-892	3	50
77	Symbiosis-enhanced gene expression in cnidarian-algal associations: cloning and characterization of a cDNA, sym32, encoding a possible cell adhesion protein. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2000**, 126, 33-44	2.6	49
76	The susceptibility and resilience of corals to thermal stress: adaptation, acclimatization or both?. *Molecular Ecology*, **2010**, 19, 1515-7	5.7	48
75	The Induction of Carbonic Anhydrase in the Symbiotic Sea Anemone Aiptasia pulchella. *Biological Bulletin*, **1991**, 180, 496-504	1.5	47
74	Highly conserved caspase and Bcl-2 homologues from the sea anemone Aiptasia pallida: lower metazoans as models for the study of apoptosis evolution. *Journal of Molecular Evolution*, **2006**, 63, 95-107	2.1	46
73	TIR-domain-containing protein repertoire of nine anthozoan species reveals coral-specific expansions and uncharacterized proteins. *Developmental and Comparative Immunology*, **2014**, 46, 480-8	3.2	44
72	Response of the symbiotic cnidarian Anthopleura elegantissima transcriptome to temperature and UV increase. *Comparative Biochemistry and Physiology Part D: Genomics and Proteomics*, **2008**, 3, 283-9	2	43

71	BIOLOGY OF HYDRACTINIID HYDROIDS. 4. ULTRASTRUCTURE OF THE PLANULA OFHYDRACTINIA ECHINATA. *Biological Bulletin*, **1985**, 168, 403-418	1.5	43
70	Partner switching and metabolic flux in a model cnidarian-dinoflagellate symbiosis. *Proceedings of the Royal Society B: Biological Sciences*, **2018**, 285,	4.4	43
69	De Novo Assembly and Characterization of Four Anthozoan (Phylum Cnidaria) Transcriptomes. *G3: Genes, Genomes, Genetics*, **2015**, 5, 2441-52	3.2	41
68	The diversity of C-type lectins in the genome of a basal metazoan, Nematostella vectensis. *Developmental and Comparative Immunology*, **2009**, 33, 881-9	3.2	41
67	Differential accumulation of heavy metals in the sea anemone Anthopleura elegantissima as a function of symbiotic state. *Aquatic Toxicology*, **2003**, 64, 317-29	5.1	41
66	Thermal Shock Induces Host Proteostasis Disruption and Endoplasmic Reticulum Stress in the Model Symbiotic Cnidarian Aiptasia. *Journal of Proteome Research*, **2017**, 16, 2121-2134	5.6	40
65	Diversity of dinoflagellate symbionts in Red Sea soft corals: mode of symbiont acquisition matters. *Marine Ecology - Progress Series*, **2004**, 275, 89-95	2.6	40
64	FLOW-CYTOMETRIC CHARACTERIZATION OF THE CELL-SURFACE GLYCANS OF SYMBIOTIC DINOFLAGELLATES (SYMBIODINIUM SPP.)1. *Journal of Phycology*, **2010**, 46, 525-533	3	39
63	Motility of zooxanthellae isolated from the Red Sea soft coral Heteroxenia fuscescens (Cnidaria). *Journal of Experimental Marine Biology and Ecology*, **2004**, 298, 35-48	2.1	39
62	The Role of Complement in Cnidarian-Dinoflagellate Symbiosis and Immune Challenge in the Sea Anemone Aiptasia pallida. *Frontiers in Microbiology*, **2016**, 7, 519	5.7	39
61	Menthol-induced bleaching rapidly and effectively provides experimental aposymbiotic sea anemones (Aiptasia sp.) for symbiosis investigations. *Journal of Experimental Biology*, **2016**, 219, 306-10	3	37
60	Coral larvae exhibit few measurable transcriptional changes during the onset of coral-dinoflagellate endosymbiosis. *Marine Genomics*, **2010**, 3, 107-16	1.9	37
59	Diel rhythmicity of lipid-body formation in a coral-Symbiodinium endosymbiosis. *Coral Reefs*, **2012**, 31, 521-534	4.2	36
58	Knockdown of actin and caspase gene expression by RNA interference in the symbiotic anemone Aiptasia pallida. *Biological Bulletin*, **2007**, 212, 250-8	1.5	36
57	Abundant mRNAs in the squid light organ encode proteins with a high similarity to mammalian peroxidases. *Gene*, **1993**, 132, 219-26	3.8	35
56	Stress and death of cnidarian host cells play a role in cnidarian bleaching. *Journal of Experimental Biology*, **2013**, 216, 2813-20	3	34
55	Linking Ecology and Epidemiology to Understand Predictors of Multi-Host Responses to an Emerging Pathogen, the Amphibian Chytrid Fungus. *PLoS ONE*, **2017**, 12, e0167882	3.7	33
54	Elevated temperature impairs onset of symbiosis and reduces survivorship in larvae of the Hawaiian coral, Fungia scutaria. *Marine Biology*, **2012**, 159, 633-642	2.5	33

53	Enhanced Production of ALDH-Like Protein in the Bacterial Light Organ of the Sepiolid Squid Euprymna scolopes. *Biological Bulletin*, **1993**, 184, 309-321	1.5	33
52	Cell Biology of Coral Symbiosis: Foundational Study Can Inform Solutions to the Coral Reef Crisis. *Integrative and Comparative Biology*, **2019**, 59, 845-855	2.8	32
51	Comparative proteomics of symbiotic and aposymbiotic juvenile soft corals. *Marine Biotechnology*, **2006**, 8, 11-6	3.4	32
50	Transcription factor NF-Ƀ is modulated by symbiotic status in a sea anemone model of cnidarian bleaching. *Scientific Reports*, **2017**, 7, 16025	4.9	31
49	Differential accumulation of cadmium and changes in glutathione levels as a function of symbiotic state in the sea anemone Anthopleura elegantissima. *Journal of Experimental Marine Biology and Ecology*, **2003**, 284, 71-85	2.1	31
48	Effect of elevated temperature on fecundity and reproductive timing in the coral Acropora digitifera. *Zygote*, **2016**, 24, 511-6	1.6	30
47	Analytical approach for selecting normalizing genes from a cDNA microarray platform to be used in q-RT-PCR assays: a cnidarian case study. *Journal of Proteomics*, **2008**, 70, 985-91		28
46	Role of the sphingosine rheostat in the regulation of cnidarian-dinoflagellate symbioses. *Biological Bulletin*, **2011**, 221, 261-9	1.5	27
45	Symbiont Identity Influences Patterns of Symbiosis Establishment, Host Growth, and Asexual Reproduction in a Model Cnidarian-Dinoflagellate Symbiosis. *Biological Bulletin*, **2018**, 234, 1-10	1.5	26
44	Proteomics quantifies protein expression changes in a model cnidarian colonised by a thermally tolerant but suboptimal symbiont. *ISME Journal*, **2019**, 13, 2334-2345	11.9	25
43	First evidence of maternal transmission of algal endosymbionts at an oocyte stage in a triploblastic host, with observations on reproduction in Waminoa brickneri (Acoelomorpha). *Invertebrate Biology* , **2007**, 126, 113-119	1	25
42	Development of symbiosis-specific genes as biomarkers for the early detection of cnidarian-algal symbiosis breakdown. *Marine Environmental Research*, **2002**, 54, 345-9	3.3	25
41	The scavenger receptor repertoire in six cnidarian species and its putative role in cnidarian-dinoflagellate symbiosis. *PeerJ*, **2016**, 4, e2692	3.1	25
40	Subtle Differences in Symbiont Cell Surface Glycan Profiles Do Not Explain Species-Specific Colonization Rates in a Model Cnidarian-Algal Symbiosis. *Frontiers in Microbiology*, **2018**, 9, 842	5.7	24
39	Proteomic and transcriptional analyses of coral larvae newly engaged in symbiosis with dinoflagellates. *Comparative Biochemistry and Physiology Part D: Genomics and Proteomics*, **2007**, 2, 63-73	2	24
38	Localization of a symbiosis-related protein, Sym32, in the Anthopleura elegantissima-Symbiodinium muscatinei Association. *Biological Bulletin*, **2003**, 205, 339-50	1.5	24
37	Increasing comparability among coral bleaching experiments. *Ecological Applications*, **2021**, 31, e02262	4.9	24
36	A diverse host thrombospondin-type-1 repeat protein repertoire promotes symbiont colonization during establishment of cnidarian-dinoflagellate symbiosis. *ELife*, **2017**, 6,	8.9	22

35	CHARACTERIZATION OF A SHORT FORM PERIDININ-CHLOROPHYLL-PROTEIN (PCP) cDNA AND PROTEIN FROM THE SYMBIOTIC DINOFLAGELLATE SYMBIODINIUM MUSCATINEI (DINOPHYCEAE) FROM THE SEA ANEMONE ANTHOPLEURA ELEGANTISSIMA (CNIDARIA) 1. *Journal of Phycology*, **2002**, 38, 157-163	3	21
34	The Molecular Language of the Cnidarian-Dinoflagellate Symbiosis. *Trends in Microbiology*, **2021**, 29, 320-333	12.4	20
33	Productivity of Zooxanthellae and Biogeochemical Cycles **1992**, 257-271		19
32	Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis. *Molecular Phylogenetics and Evolution*, **2018**, 120, 307-320	4.1	18
31	Inter-partner specificity limits the acquisition of thermotolerant symbionts in a model cnidarian-dinoflagellate symbiosis. *ISME Journal*, **2019**, 13, 2489-2499	11.9	17
30	Elevated temperature alters the lunar timing of Planulation in the brooding coral Pocillopora damicornis. *PLoS ONE*, **2014**, 9, e107906	3.7	15
29	Development and survivorship of zooxanthellate and azooxanthellate primary polyps of the soft coral Heteroxenia fuscescens: laboratory and field comparisons. *Marine Biology*, **2003**, 142, 1055-1063	2.5	15
28	The sphingosine rheostat is involved in the cnidarian heat stress response but not necessarily in bleaching. *Journal of Experimental Biology*, **2017**, 220, 1709-1720	3	12
27	Host and Symbiont Cell Cycle Coordination Is Mediated by Symbiotic State, Nutrition, and Partner Identity in a Model Cnidarian-Dinoflagellate Symbiosis. *MBio*, **2020**, 11,	7.8	12
26	Two atypical carbonic anhydrase homologs from the planula larva of the scleractinian coral Fungia scutaria. *Biological Bulletin*, **2006**, 211, 18-30	1.5	12
25	Aspects of the larval biology of the sea anemones Anthopleura elegantissima and A. artemisia. *Invertebrate Biology*, **2005**, 121, 190-201	1	12
24	Impacts of temperature and lunar day on gene expression profiles during a monthly reproductive cycle in the brooding coral Pocillopora damicornis. *Molecular Ecology*, **2017**, 26, 3913-3925	5.7	11
23	Implication of the host TGF pathway in the onset of symbiosis between larvae of the coral Fungia scutaria and the dinoflagellate Symbiodinium sp. (clade C1f). *Coral Reefs*, **2017**, 36, 1263-1268	4.2	10
22	Cyclophilin and the regulation of symbiosis in Aiptasia pallida. *Biological Bulletin*, **2008**, 215, 63-72	1.5	10
21	Len Muscatine (1932–2007) and his contributions to the understanding of algal-invertebrate endosymbiosis. *Coral Reefs*, **2007**, 26, 731-739	4.2	8
20	Limitations of Using Cultured Algae to Study Cnidarian-Algal Symbioses and Suggestions for Future Studies. *Journal of Phycology*, **2021**, 57, 30-38	3	8
19	The coral holobiont highlights the dependence of cnidarian animal hosts on their associated microbes **2020**, 91-118		7
18	Animal–Symbiodinium Symbioses: Foundations of Coral Reef Ecosystems. *Advances in Environmental Microbiology*, **2016**, 269-294	1.3	7

List of Publications

17	Sub-cellular imaging shows reduced photosynthetic carbon and increased nitrogen assimilation by the non-native endosymbiont Durusdinium trenchii in the model cnidarian Aiptasia. *Environmental Microbiology*, **2020**, 22, 3741-3753	5.2	6
16	Characterization of a novel EF-hand homologue, CnidEF, in the sea anemone Anthopleura elegantissima. *Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology*, **2007**, 146, 551-9	2.3	6
15	Metabolite pools of the reef building coral Montipora capitata are unaffected by Symbiodiniaceae community composition. *Coral Reefs*, **2020**, 39, 1727-1737	4.2	6
14	N-Linked Surface Glycan Biosynthesis, Composition, Inhibition, and Function in Cnidarian-Dinoflagellate Symbiosis. *Microbial Ecology*, **2020**, 80, 223-236	4.4	5
13	Sphingolipid Metabolism of a Sea Anemone Is Altered by the Presence of Dinoflagellate Symbionts. *Biological Bulletin*, **2017**, 233, 242-254	1.5	5
12	Six priorities to advance the science and practice of coral reef restoration worldwide. *Restoration Ecology*,e13498	3.1	5
11	Identification of biomarkers indicative of barotrauma and recovery in black rockfish Sebastes melanops. *Journal of Fish Biology*, **2012**, 81, 181-96	1.9	4
10	Genetic variation in heat tolerance of the coral Platygyra daedalea offers the potential for adaptation to ocean warming		3
9	Techniques for Exploring Symbiosis-Specific Gene Expression in Cnidarian/Algal Associations **1998**, 435-448		2
8	Symbiosis research, technology, and education: Proceedings of the 6th International Symbiosis Society Congress held in Madison Wisconsin, USA, August 2009. *Symbiosis*, **2010**, 51, 1-12	3	1
7	Biological bulletin virtual symposium: discoveries in animal symbiosis in the omics age. *Biological Bulletin*, **2012**, 223, 5-6	1.5	1
6	Phylogenetic analysis of cell-cycle regulatory proteins within the Symbiodiniaceae. *Scientific Reports*, **2020**, 10, 20473	4.9	1
5	Tentacle patterning during pedal lacerate development differs between symbiotic and aposymbiotic animals.. *PeerJ*, **2022**, 10, e12770	3.1	0
4	Symbiosis with Dinoflagellates Alters Cnidarian Cell-Cycle Gene Expression. *Cellular Microbiology*, **2022**, 2022, 1-20	3.9	0
3	EvoDevo meets ecology: the Ninth Okazaki Biology Conference on Marine Biology. *EvoDevo*, **2013**, 4, 18	3.2	
2	Ruth D. Gates (1962-2018). *Nature Ecology and Evolution*, **2019**, 3, 10-11	12.3	
1	The metabolic significance of symbiont community composition in the coral-algal symbiosis **2022**, 211-229		