Thomas C G Bosch

List of Publications by Year
in descending order

164 papers	12,818 citations	29994 54 h-index	28224 105 g-index
186 all docs	186 docs citations	186 times ranked	10749 citing authors

#	Article	IF	Citations
1	The Role of DNA Methylation in Genome Defense in Cnidaria and Other Invertebrates. Molecular Biology and Evolution, 2022, 39, .	3.5	10
2	<i>Hydra</i> and the hair follicle â€“ An unconventional comparative biology approach to exploring the human holobiont. BioEssays, 2022, 44, e2100233.	1.2	4
3	Hydraâ€™s Lasting Partnership with Microbes: The Key for Escaping Senescence?. Microorganisms, 2022, 10, 774.	1.6	4
4	Symbiont transmission in marine sponges: reproduction, development, and metamorphosis. BMC Biology, 2022, 20, 100.	1.7	22
5	Symbiosis: the other cells in development. Development (Cambridge), 2022, 149, .	1.2	13
6	Beyond Lynn Margulisâ€™ green hydra. Symbiosis, 2022, 87, 11-17.	1.2	2
7	Macrophages Are Polarized toward an Inflammatory Phenotype by their Aged Microenvironment in the Human Skin. Journal of Investigative Dermatology, 2022, 142, 3136-3145.e11.	0.3	5
8	Exploring the human hair follicle microbiome*. British Journal of Dermatology, 2021, 184, 802-815.	1.4	58
9	AmAMP1 from Acropora millepora and damicornin define a family of coral-specific antimicrobial peptides related to the Shk toxins of sea anemones. Developmental and Comparative Immunology, 2021, 114, 103866.	1.0	9
10	Animal development in the microbial world: The power of experimental model systems. Current Topics in Developmental Biology, 2021, 141, 371-397.	1.0	9
11	Animal development in the microbial world: Re-thinking the conceptual framework. Current Topics in Developmental Biology, 2021, 141, 399-427.	1.0	24
12	Neurons interact with the microbiome: an evolutionary-informed perspective. Neuroforum, 2021, .	0.2	5
13	Beating in on a stable partnership. Nature Reviews Microbiology, 2021, 19, 619-620.	13.6	0
14	Taking a microscale look at symbiotic interactionsâ€”and why it matters. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2110874118.	3.3	1
15	Antimicrobial Peptidesâ€”or How Our Ancestors Learned to Control the Microbiome. MBio, 2021, 12, e0184721.	1.8	29
16	Making the invisible visible: exploring hostâ€“microbiome interactions across different taxa using data-driven 3D visualization. Biochemist, 2021, 43, 40-45.	0.2	1
17	The hygiene hypothesis, the COVID pandemic, and consequences for the human microbiome. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	100
18	Is â€œzoologyâ€•dead?. Zoology, 2021, 149, 125971.	0.6	0

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19	Bdellovibrio and Like Organisms Are Predictors of Microbiome Diversity in Distinct Host Groups. Microbial Ecology, 2020, 79, 252-257.	1.4	35
20	Boundary maintenance in the ancestral metazoan Hydra depends on histone acetylation. Developmental Biology, 2020, 458, 200-214.	0.9	4
21	Prototypical pacemaker neurons interact with the resident microbiota. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17854-17863.	3.3	47
22	Microbial Species Coexistence Depends on the Host Environment. MBio, 2020, 11, .	1.8	20
23	Exploring the Niche Concept in a Simple Metaorganism. Frontiers in Microbiology, 2020, 11, 1942.	1.5	6
24	Bacteria- and temperature-regulated peptides modulate Î²-catenin signaling in <i>Hydra</i>. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 21459-21468.	3.3	17
25	The isolated zoologist. Zoology, 2020, 143, 125857.	0.6	0
26	Dynamic interactions within the host-associated microbiota cause tumor formation in the basal metazoan Hydra. PLoS Pathogens, 2020, 16, e1008375.	2.1	28
27	The model zoologist: how should we think about animals, model animals, and non-model model animals?. Zoology, 2020, 138, 125749.	0.6	2
28	Symbiotic interactions in the holobiont Hydra. , 2020, , 65-77.		3
29	Cellular dialogues between hosts and microbial symbionts. , 2020, , 287-290.		1
30	Temperature and insulin signaling regulate body size in Hydra by the Wnt and TGF-beta pathways. Nature Communications, 2019, 10, 3257.	5.8	27
31	Multidisciplinary Approaches to Exploring Humanâ€“Microbiome Interactions. BioEssays, 2019, 41, 1-2.	1.2	14
32	Comparative analysis of amplicon and metagenomic sequencing methods reveals key features in the evolution of animal metaorganisms. Microbiome, 2019, 7, 133.	4.9	141
33	Squid genomes in a bacterial world. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2799-2801.	3.3	3
34	Neutrality in the Metaorganism. PLoS Biology, 2019, 17, e3000298.	2.6	61
35	Transgenesis in Hydra to characterize gene function and visualize cell behavior. Nature Protocols, 2019, 14, 2069-2090.	5.5	32
36	The Microbiome Mediates Environmental Effects on Aging. BioEssays, 2019, 41, e1800257.	1.2	33

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37	Exposure of the Host-Associated Microbiome to Nutrient-Rich Conditions May Lead to Dysbiosis and Disease Developmentâ€"an Evolutionary Perspective. MBio, 2019, 10, .	1.8	19
38	Evolutionary â€œExperimentsâ€• in Symbiosis: The Study of Model Animals Provides Insights into the Mechanisms Underlying the Diversity of Hostâ€"Microbe Interactions. BioEssays, 2019, 41, e1800256.	1.2	34
39	Resolving structure and function of metaorganisms through a holistic framework combining reductionist and integrative approaches. Zoology, 2019, 133, 81-87.	0.6	53
40	Hydra as Model to Determine the Role of FOXO in Longevity. Methods in Molecular Biology, 2019, 1890, 231-238.	0.4	2
41	Stem Cells in a Holobiont. , 2019, , 267-279.		0
42	Metaorganisms in extreme environments: do microbes play a role in organismal adaptation?. Zoology, 2018, 127, 1-19.	0.6	194
43	Grow With the Challenge â€" Microbial Effects on Epithelial Proliferation, Carcinogenesis, and Cancer Therapy. Frontiers in Microbiology, 2018, 9, 2020.	1.5	26
44	Acute toxic effects of zinc oxide nanoparticles on Hydra magnipapillata. Aquatic Toxicology, 2018, 205, 130-139.	1.9	24
45	The microbiome and the human: A reply to Parke and colleagues. PLoS Biology, 2018, 16, e2006974.	2.6	4
46	Tracing the Evolutionary Origin of the Gutâ€"Brain Axis. , 2018, , 61-80.		0
47	Carrying Capacity and Colonization Dynamics of Curvibacter in the Hydra Host Habitat. Frontiers in Microbiology, 2018, 9, 443.	1.5	39
48	Stem Cell Transcription Factor FoxO Controls Microbiome Resilience in Hydra. Frontiers in Microbiology, 2018, 9, 629.	1.5	24
49	Rethinking the Role of the Nervous System: Lessons From the <i>Hydra</i> Holobiont. BioEssays, 2018, 40, e1800060.	1.2	48
50	How the microbiome challenges our concept of self. PLoS Biology, 2018, 16, e2005358.	2.6	81
51	Non-senescent Hydra tolerates severe disturbances in the nuclear lamina. Aging, 2018, 10, 951-972.	1.4	21
52	Metabolic co-dependence drives the evolutionarily ancient Hydraâ€"Chlorella symbiosis. ELife, 2018, 7, .	2.8	47
53	Back to the Basics: Cnidarians Start to Fire. Trends in Neurosciences, 2017, 40, 92-105.	4.2	102
54	A secreted antibacterial neuropeptide shapes the microbiome of Hydra. Nature Communications, 2017, 8, 698.	5.8	101

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55	Competing forces maintain the <i>Hydra</i> metaorganism. Immunological Reviews, 2017, 279, 123-136.	2.8	33
56	Host modification of a bacterial quorum-sensing signal induces a phenotypic switch in bacterial symbionts. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8488-E8497.	3.3	69
57	Eco-Aging: stem cells and microbes are controlled by aging antagonist FoxO. Current Opinion in Microbiology, 2017, 38, 181-187.	2.3	26
58	Spontaneous body contractions are modulated by the microbiome of Hydra. Scientific Reports, 2017, 7, 15937.	1.6	74
59	Temperate phages as self-replicating weapons in bacterial competition. Journal of the Royal Society Interface, 2017, 14, 20170563.	1.5	39
60	Emergence of Immune System Components in Cnidarians. , 2016, , 397-406.		2
61	Transitioning from Microbiome Composition to Microbial Community Interactions: The Potential of the Metaorganism Hydra as an Experimental Model. Frontiers in Microbiology, 2016, 7, 1610.	1.5	49
62	Getting the Hologenome Concept Right: an Eco-Evolutionary Framework for Hosts and Their Microbiomes. MSystems, 2016, 1, .	1.7	388
63	The Origin of Mucosal Immunity: Lessons from the Holobiont <i>Hydra</i>. MBio, 2016, 7, .	1.8	53
64	FRT - FONDATION RENE TOURAINE. Experimental Dermatology, 2016, 25, 917-932.	1.4	0
65	The Holobiont Imperative. , 2016, , .		47
66	Introduction: The Holobiont Imperative. , 2016, , 1-10.		2
67	Negotiations Between Early Evolving Animals and Symbionts. , 2016, , 57-65.		1
68	The Hydra Holobiont: A Tale of Several Symbiotic Lineages. , 2016, , 79-97.		3
69	Corals. , 2016, , 99-111.		1
70	Role of Symbionts in Evolutionary Processes. , 2016, , 67-77.		0
71	Seeking a Holistic View of Early Emerging Metazoans: The Power of Modularity. , 2016, , 135-138.		0
72	The Hidden Impact of Viruses. , 2016, , 127-133.		0

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73	Major Events in the Evolution of Planet Earth: Some Origin Stories. , 2016, , 11-26.		2
74	Phylosymbiosis: Novel Genomic Approaches Discover the Holobiont. , 2016, , 47-55.		0
75	Which games are growing bacterial populations playing?. Journal of the Royal Society Interface, 2015, 12, 20150121.	1.5	51
76	Revisiting the age, evolutionary history and species level diversity of the genus Hydra (Cnidaria:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	1.2	50
77	Microbial ecology in Hydra: Why viruses matter. Journal of Microbiology, 2015, 53, 193-200.	1.3	20
78	Eco-Evo-Devo: developmental symbiosis and developmental plasticity as evolutionary agents. Nature Reviews Genetics, 2015, 16, 611-622.	7.7	281
79	Bacteriaâ€“bacteria interactions within the microbiota of the ancestral metazoan Hydra contribute to fungal resistance. ISME Journal, 2015, 9, 1543-1556.	4.4	196
80	Species-Specific Viromes in the Ancestral Holobiont Hydra. PLoS ONE, 2014, 9, e109952.	1.1	53
81	Regulation of Polyp-to-Jellyfish Transition in Aurelia aurita. Current Biology, 2014, 24, 263-273.	1.8	152
82	Rethinking the role of immunity: lessons from Hydra. Trends in Immunology, 2014, 35, 495-502.	2.9	83
83	How do environmental factors influence life cycles and development? An experimental framework for earlyâ€diverging metazoans. BioEssays, 2014, 36, 1185-1194.	1.2	38
84	Naturally occurring tumours in the basal metazoan Hydra. Nature Communications, 2014, 5, 4222.	5.8	109
85	Cnidarian-Microbe Interactions and the Origin of Innate Immunity in Metazoans. Annual Review of Microbiology, 2013, 67, 499-518.	2.9	138
86	Stem cells and aging from a quasiâ€immortal point of view. BioEssays, 2013, 35, 994-1003.	1.2	35
87	Animals in a bacterial world, a new imperative for the life sciences. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3229-3236.	3.3	2,181
88	Bacterial colonization of <i>Hydra</i> hatchlings follows a robust temporal pattern. ISME Journal, 2013, 7, 781-790.	4.4	96
89	Epigenetic Regulation of Depot-Specific Gene Expression in Adipose Tissue. PLoS ONE, 2013, 8, e82516.	1.1	33
90	Distinct antimicrobial peptide expression determines host species-specific bacterial associations. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3730-8.	3.3	312

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91	Understanding complex host-microbe interactions in<i>Hydra</i>. Gut Microbes, 2012, 3, 345-351.	4.3	38
92	<i>Hydra</i> meiosis reveals unexpected conservation of structural synaptonemal complex proteins across metazoans. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16588-16593.	3.3	45
93	MyD88-deficient <i>Hydra</i> reveal an ancient function of TLR signaling in sensing bacterial colonizers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19374-19379.	3.3	154
94	Migration of multipotent interstitial stem cells in Hydra. Zoology, 2012, 115, 275-282.	0.6	21
95	Bakterien â€“ eher Partner als Feinde. Biologie in Unserer Zeit, 2012, 42, 302-309.	0.3	1
96	Rethinking the origin of multicellularity: Where do epithelia come from? (Comment on DOI) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 T	1.2	1
97	FoxO is a critical regulator of stem cell maintenance in immortal <i>Hydra</i>. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19697-19702.	3.3	161
98	Where Simplicity Meets Complexity: Hydra, a Model for Hostâ€“Microbe Interactions. Advances in Experimental Medicine and Biology, 2012, 710, 71-81.	0.8	22
99	What Hydra Has to Say About the Role and Origin of Symbiotic Interactions. Biological Bulletin, 2012, 223, 78-84.	0.7	30
100	Molecular Signatures of the Three Stem Cell Lineages in Hydra and the Emergence of Stem Cell Function at the Base of Multicellularity. Molecular Biology and Evolution, 2012, 29, 3267-3280.	3.5	140
101	Evolution of human longevity: lessons from Hydra. Aging, 2012, 4, 730-731.	1.4	16
102	Metaorganisms as the new frontier. Zoology, 2011, 114, 185-190.	0.6	346
103	Embryo protection in contemporary immunology. Communicative and Integrative Biology, 2011, 4, 369-372.	0.6	19
104	Defining the Origins of the NOD-Like Receptor System at the Base of Animal Evolution. Molecular Biology and Evolution, 2011, 28, 1687-1702.	3.5	119
105	Phylogenomics Reveals an Anomalous Distribution of USP Genes in Metazoans. Molecular Biology and Evolution, 2011, 28, 153-161.	3.5	19
106	Embryo protection in contemporary immunology: Why bacteria matter. Communicative and Integrative Biology, 2011, 4, 369-72.	0.6	7
107	The Hydra polyp: Nothing but an active stem cell community. Development Growth and Differentiation, 2010, 52, 15-25.	0.6	108
108	Why bacteria matter in animal development and evolution. BioEssays, 2010, 32, 571-580.	1.2	257

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109	The dynamic genome of Hydra. Nature, 2010, 464, 592-596.	13.7	743
110	In an early branching metazoan, bacterial colonization of the embryo is controlled by maternal antimicrobial peptides. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18067-18072.	3.3	143
111	How Hydra senses and destroys microbes. Seminars in Immunology, 2010, 22, 54-58.	2.7	62
112	Î²-catenin plays a central role in setting up the head organizer in hydra. Developmental Biology, 2010, 340, 116-124.	0.9	82
113	Cnidarian Immunity: A Tale of Two Barriers. Advances in Experimental Medicine and Biology, 2010, 708, 1-16.	0.8	41
114	Evolution and Function of Innate Immune Receptors â€“ Insights from Marine Invertebrates. Journal of Innate Immunity, 2009, 1, 291-300.	1.8	69
115	Activity of the Novel Peptide Arminin against Multiresistant Human Pathogens Shows the Considerable Potential of Phylogenetically Ancient Organisms as Drug Sources. Antimicrobial Agents and Chemotherapy, 2009, 53, 5245-5250.	1.4	58
116	More than just orphans: are taxonomically-restricted genes important in evolution?. Trends in Genetics, 2009, 25, 404-413.	2.9	399
117	Stammzellen in <i>Hydra</i>. EvolutionÃres VermÃchtnis. Biologie in Unserer Zeit, 2009, 39, 114-122.	0.3	2
118	Hydra and the evolution of stem cells. BioEssays, 2009, 31, 478-486.	1.2	128
119	Further characterization of the PW peptide family that inhibits neuron differentiation in Hydra. Development Genes and Evolution, 2009, 219, 119-129.	0.4	16
120	Disturbing epithelial homeostasis in the metazoan <i>Hydra</i> leads to drastic changes in associated microbiota. Environmental Microbiology, 2009, 11, 2361-2369.	1.8	64
121	Plasticity of epithelial cell shape in response to upstream signals: A whole-organism study using transgenic Hydra. Zoology, 2009, 112, 185-194.	0.6	26
122	Hydramacin-1, Structure and Antibacterial Activity of a Protein from the Basal Metazoan Hydra. Journal of Biological Chemistry, 2009, 284, 1896-1905.	1.6	107
123	Uncovering the evolutionary history of innate immunity: The simple metazoan Hydra uses epithelial cells for host defence. Developmental and Comparative Immunology, 2009, 33, 559-569.	1.0	195
124	Identification of a kazal-type serine protease inhibitor with potent anti-staphylococcal activity as part of Hydra's innate immune system. Developmental and Comparative Immunology, 2009, 33, 830-837.	1.0	86
125	Characterization of taxonomically restricted genes in a phylum-restricted cell type. Genome Biology, 2009, 10, R8.	13.9	59
126	Exploring Host-Microbe Interactions in Hydra. Microbe Magazine, 2009, 4, 457-462.	0.4	10

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127	Compagen, a comparative genomics platform for early branching metazoan animals, reveals early origins of genes regulating stemâ€cell differentiation. BioEssays, 2008, 30, 1010-1018.	1.2	104
128	Cell type complexity in the basal metazoan Hydra is maintained by both stem cell based mechanisms and transdifferentiation. Developmental Biology, 2008, 313, 13-24.	0.9	67
129	A Novel Gene Family Controls Species-Specific Morphological Traits in Hydra. PLoS Biology, 2008, 6, e278.	2.6	85
130	Long-term maintenance of species-specific bacterial microbiota in the basal metazoan <i>Hydra</i>. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13146-13151.	3.3	320
131	Why polyps regenerate and we don't: Towards a cellular and molecular framework for Hydra regeneration. Developmental Biology, 2007, 303, 421-433.	0.9	174
132	Transgenic stem cells in Hydra reveal an early evolutionary origin for key elements controlling self-renewal and differentiation. Developmental Biology, 2007, 309, 32-44.	0.9	113
133	Allorecognition in urochordates: Identification of a highly variable complement receptor-like protein expressed in follicle cells of Ciona. Developmental and Comparative Immunology, 2007, 31, 360-371.	1.0	27
134	In the urochordate Ciona intestinalis zona pellucida domain proteins vary among individuals. Developmental and Comparative Immunology, 2007, 31, 1242-1254.	1.0	25
135	The evolution of immunity: a low-life perspective. Trends in Immunology, 2007, 28, 449-454.	2.9	89
136	The innate immune repertoire in Cnidaria - ancestral complexity and stochastic gene loss. Genome Biology, 2007, 8, R59.	13.9	322
137	Molecular phylogenetics in Hydra, a classical model in evolutionary developmental biology. Molecular Phylogenetics and Evolution, 2007, 44, 281-290.	1.2	74
138	Symmetry Breaking in Stem Cells of the Basal Metazoan Hydra. Progress in Molecular and Subcellular Biology, 2007, 45, 61-78.	0.9	15
139	Discovery of genes expressed in Hydra embryogenesis. Developmental Biology, 2006, 289, 466-481.	0.9	48
140	Dickkopf related genes are components of the positional value gradient in Hydra. Developmental Biology, 2006, 296, 62-70.	0.9	75
141	Foot differentiation and genomic plasticity in Hydra: lessons from the PPOD gene family. Development Genes and Evolution, 2006, 216, 57-68.	0.4	16
142	Transgenic Hydra allow in vivo tracking of individual stem cells during morphogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6208-6211.	3.3	288
143	Symbiotic Hydra express a plant-like peroxidase gene during oogenesis. Journal of Experimental Biology, 2005, 208, 2157-2165.	0.8	68
144	Genome sizes and chromosomes in the basal metazoan Hydra. Zoology, 2004, 107, 219-227.	0.6	42

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145	A Dickkopf - 3 -related gene is expressed in differentiating nematocytes in the basal metazoan Hydra. Development Genes and Evolution, 2004, 214, 72-80.	0.4	53
146	Control of asymmetric cell divisions: will cnidarians provide an answer?. BioEssays, 2004, 26, 929-931.	1.2	13
147	The Hydra viridis / Chlorella symbiosis. Growth and sexual differentiation in polyps without symbionts. Zoology, 2003, 106, 101-108.	0.6	59
148	Self/nonself recognition in Cnidaria: contact to allogeneic tissue does not result in elimination of nonself cells in Hydra vulgaris. Zoology, 2003, 106, 109-116.	0.6	12
149	Expression of developmental genes during early embryogenesis of Hydra. Development Genes and Evolution, 2003, 213, 445-455.	0.4	32
150	Enhanced antibacterial activity in Hydra polyps lacking nerve cells. Developmental and Comparative Immunology, 2003, 27, 79-85.	1.0	22
151	Ancient signals: peptides and the interpretation of positional information in ancestral metazoans. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2003, 136, 185-196.	0.7	23
152	Patterning and cell differentiation inHydra: novel genes and the limits to conservation. Canadian Journal of Zoology, 2002, 80, 1670-1677.	0.4	31
153	Epithelial interactions in<i>Hydra</i>: apoptosis in interspecies grafts is induced by detachment from the extracellular matrix. Journal of Experimental Biology, 2002, 205, 3809-3817.	0.8	22
154	Epithelial interactions in Hydra: apoptosis in interspecies grafts is induced by detachment from the extracellular matrix. Journal of Experimental Biology, 2002, 205, 3809-17.	0.8	18
155	Polyps, peptides and patterning. BioEssays, 2001, 23, 420-427.	1.2	68
156	Selective protein kinase inhibitors block head-specific differentiation in hydra. Cellular Signalling, 2000, 12, 649-658.	1.7	26
157	The novel peptide HEADY specifies apical fate in a simple radially symmetric metazoan. Genes and Development, 2000, 14, 2771-2777.	2.7	54
158	Cloning and expression of a heat-inducible hsp70 gene in two species of Hydra which differ in their stress response. FEBS Journal, 1992, 210, 683-691.	0.2	52
159	Role of the cellular environment in interstitial stem cell proliferation in Hydra. Roux's Archives of Developmental Biology, 1991, 200, 269-276.	1.2	20
160	Transplantation stimulates interstitial cell migration in hydra. Developmental Biology, 1990, 138, 509-512.	0.9	24
161	Cloned interstitial stem cells grow as contiguous patches in hydra. Developmental Biology, 1990, 138, 513-515.	0.9	14
162	Stem cells of Hydra magnipapillata can differentiate into somatic cells and germ line cells. Developmental Biology, 1987, 121, 182-191.	0.9	148

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163	Growth regulation in Hydra: Relationship between epithelial cell cycle length and growth rate. Developmental Biology, 1984, 104, 161-171.	0.9	137
164	Symbiotic Algae of Hydra viridissima Play a Key Role in Maintaining Homeostatic Bacterial Colonization. Frontiers in Microbiology, 0, 13, .	1.5	5