Michael K Richardson

List of Publications by Year
in descending order

139 papers	8,101 citations	44066 48 h-index	51602 86 g-index
144 all docs	144 docs citations	144 times ranked	7732 citing authors

#	Article	IF	Citations
1	Theories, laws, and models in evoâ€devo. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2022, 338, 36-61.	1.3	11
2	Dynamic genetic differentiation drives the widespread structural and functional convergent evolution of snake venom proteinaceous toxins. BMC Biology, 2022, 20, 4.	3.8	17
3	The revolutionary developmental biology of <scp>W</scp>ilhelm <scp>H</scp>is, <scp>Sr.</scp>. Biological Reviews, 2022, 97, 1131-1160.	10.4	5
4	Developmental neuroanatomy of the rosy bitterling Rhodeus ocellatus (Teleostei:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (	1.6	2
5	Convergent evolution of toxin resistance in animals. Biological Reviews, 2022, 97, 1823-1843.	10.4	20
6	Convergent evolution of pain-inducing defensive venom components in spitting cobras. Science, 2021, 371, 386-390.	12.6	96
7	Normal stages of embryonic development of a brood parasite, the rosy bitterling <scp>Rhodeus ocellatus</scp> (Teleostei: Cypriniformes). Journal of Morphology, 2021, 282, 783-819.	1.2	5
8	Selection on Phalanx Development in the Evolution of the Bird Wing. Molecular Biology and Evolution, 2021, 38, 4222-4237.	8.9	5
9	Wilhelm His Sr. and the development of paraffin embedding. Der Pathologe, 2021, 42, 55-61.	1.6	3
10	The importance of individual variation for the interpretation of behavioural studies: ethanol effects vary with basal activity level in zebrafish larvae. Psychopharmacology, 2021, 238, 3155-3166.	3.1	1
11	Derivation of snake venom gland organoids for in vitro venom production. Nature Protocols, 2021, 16, 1494-1510.	12.0	13
12	Ventricular Septation and Outflow Tract Development in Crocodilians Result in Two Aortas with Bicuspid Semilunar Valves. Journal of Cardiovascular Development and Disease, 2021, 8, 132.	1.6	5
13	A non-lethal method for studying scorpion venom gland transcriptomes, with a review of potentially suitable taxa to which it can be applied. PLoS ONE, 2021, 16, e0258712.	2.5	3
14	Eye-Transcriptome and Genome-Wide Sequencing for Scolecophidia: Implications for Inferring the Visual System of the Ancestral Snake. Genome Biology and Evolution, 2021, 13, .	2.5	8
15	Widespread Evolution of Molecular Resistance to Snake Venom Î±-Neurotoxins in Vertebrates. Toxins, 2020, 12, 638.	3.4	21
16	The growth of endothelial-like cells in zebrafish embryoid body culture. Experimental Cell Research, 2020, 392, 112032.	2.6	0
17	Functional characterization of the cannabinoid receptors 1 and 2 in zebrafish larvae using behavioral analysis. Psychopharmacology, 2019, 236, 2049-2058.	3.1	19
18	Comparative transcriptome analyses of venom glands from three scorpionfishes. Genomics, 2019, 111, 231-241.	2.9	6

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19	Detection and identification of antibacterial proteins in snake venoms using at-line nanofractionation coupled to LC-MS. Toxicon, 2018, 155, 66-74.	1.6	7
20	In vitro development of zebrafish vascular networks. Reproductive Toxicology, 2017, 70, 102-115.	2.9	5
21	Outflow tract septation and the aortic arch system in reptiles: lessons for understanding the mammalian heart. EvoDevo, 2017, 8, 9.	3.2	24
22	The Evolution of Fangs, Venom, and Mimicry Systems in Blenny Fishes. Current Biology, 2017, 27, 1184-1191.	3.9	36
23	Beyond organoids: In vitro vasculogenesis and angiogenesis using cells from mammals and zebrafish. Reproductive Toxicology, 2017, 73, 292-311.	2.9	23
24	Snake Genome Sequencing: Results and Future Prospects. Toxins, 2016, 8, 360.	3.4	31
25	The Axial Level of the Heart in Snakes. , 2016, , 157-169.		0
26	Assessing Teratogenicity from the Clustering of Abnormal Phenotypes in Individual Zebrafish Larvae. Zebrafish, 2016, 13, 511-522.	1.1	4
27	Dose metrics assessment for differently shaped and sized metalâ€based nanoparticles. Environmental Toxicology and Chemistry, 2016, 35, 2466-2473.	4.3	10
28	Historical Contingency in a Multigene Family Facilitates Adaptive Evolution of Toxin Resistance. Current Biology, 2016, 26, 1616-1621.	3.9	47
29	Zebrafish as a Model for Systems Medicine R&D: Rethinking the Metabolic Effects of Carrier Solvents and Culture Buffers Determined by ¹H NMR Metabolomics. OMICS A Journal of Integrative Biology, 2016, 20, 42-52.	2.0	11
30	Metabolic effects of cannabinoids in zebrafish (Danio rerio) embryos determined by 1H NMR metabolomics. Metabolomics, 2016, 12, 1.	3.0	10
31	The sonic hedgehog signaling pathway and the development of pharyngeal arch Derivatives in Haplochromis piceatus, a Lake Victoria cichlid. Journal of Oral Biosciences, 2015, 57, 148-156.	2.2	5
32	Heterochrony and Early Left-Right Asymmetry in the Development of the Cardiorespiratory System of Snakes. PLoS ONE, 2015, 10, e116416.	2.5	14
33	Evolution and Development of Ventricular Septation in the Amniote Heart. PLoS ONE, 2014, 9, e106569.	2.5	40
34	Toxicity of differentâ€sized copper nanoâ€•and submicron particles and their shed copper ions to zebrafish embryos. Environmental Toxicology and Chemistry, 2014, 33, 1774-1782.	4.3	69
35	Particleâ€specific toxic effects of differently shaped zinc oxide nanoparticles to zebrafish embryos (Danio rerio). Environmental Toxicology and Chemistry, 2014, 33, 2859-2868.	4.3	94
36	Humerus development in moles (Talpidae, Mammalia). Acta Zoologica, 2014, 95, 283-289.	0.8	9

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37	Teratological Effects of a Panel of Sixty Water-Soluble Toxicants on Zebrafish Development. Zebrafish, 2014, 11, 129-141.	1.1	31
38	Combining Motion Analysis and Microfluidics â€“ A Novel Approach for Detecting Whole-Animal Responses to Test Substances. PLoS ONE, 2014, 9, e113235.	2.5	10
39	Osteoclast-like Cells in Early Zebrafish Embryos. Cell Journal, 2014, 16, 211-24.	0.2	20
40	Digit loss in archosaur evolution and the interplay between selection and constraints. Nature, 2013, 500, 445-448.	27.8	75
41	Developmental Effects of Cannabinoids on Zebrafish Larvae. Zebrafish, 2013, 10, 283-293.	1.1	51
42	The Burmese python genome reveals the molecular basis for extreme adaptation in snakes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20645-20650.	7.1	260
43	The king cobra genome reveals dynamic gene evolution and adaptation in the snake venom system. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20651-20656.	7.1	412
44	Exploratory behaviour in the open field test adapted for larval zebrafish: Impact of environmental complexity. Behavioural Processes, 2013, 92, 88-98.	1.1	94
45	An efficient analytical platform for on-line microfluidic profiling of neuroactive snake venoms towards nicotinic receptor affinity. Toxicon, 2013, 61, 112-124.	1.6	22
46	Microfluidic Devices for Cell, Tissue and Embryo Culture. Recent Patents on Regenerative Medicine, 2013, 3, 249-263.	0.4	3
47	Circumventing the polydactyly â€˜constraintâ€™: the mole's â€˜thumbâ€™. Biology Letters, 2012, 8, 74-77.	2.3	29
48	Zebrafish embryos and larvae in behavioural assays. Behaviour, 2012, 149, 1241-1281.	0.8	107
49	Assessment of Thigmotaxis in Larval Zebrafish. Neuromethods, 2012, , 37-51.	0.3	2
50	Methods to Quantify Basal and Stress-Induced Cortisol Response in Larval Zebrafish. Neuromethods, 2012, , 121-141.	0.3	7
51	Behavioral profiling of zebrafish embryos exposed to a panel of 60 water-soluble compounds. Behavioural Brain Research, 2012, 228, 272-283.	2.2	103
52	Measuring thigmotaxis in larval zebrafish. Behavioural Brain Research, 2012, 228, 367-374.	2.2	315
53	A Phylotypic Stage for All Animals?. Developmental Cell, 2012, 22, 903-904.	7.0	28
54	Transcriptional heterochrony in talpid mole autopods. EvoDevo, 2012, 3, 16.	3.2	16

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55	Mesoporous silica nanoparticles as a compound delivery system in zebrafish embryos. International Journal of Nanomedicine, 2012, 7, 1875.	6.7	51
56	A molecularâ€“morphological study of a peculiar limb morphology: the development and evolution of the mole's â€˜thumbâ€™. , 2012, , 301-327.		3
57	Manus horribilis: the chicken wing skeleton. , 2012, , 328-362.		4
58	The Lightâ€“Dark Preference Test for Larval Zebrafish. Neuromethods, 2012, , 21-35.	0.3	9
59	Large-Scale Assessment of the Zebrafish Embryo as a Possible Predictive Model in Toxicity Testing. PLoS ONE, 2011, 6, e21076.	2.5	174
60	Zebrafish embryo development in a microfluidic flow-through system. Lab on A Chip, 2011, 11, 1815.	6.0	87
61	Matrix metalloproteinases in osteoclasts of ontogenetic and regenerating zebrafish scales. Bone, 2011, 48, 704-712.	2.9	78
62	Patterns of avoidance behaviours in the light/dark preference test in young juvenile zebrafish: A pharmacological study. Behavioural Brain Research, 2011, 222, 15-25.	2.2	187
63	The use of the zebrafish model in stress research. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2011, 35, 1432-1451.	4.8	168
64	Large-Scale Analysis of Acute Ethanol Exposure in Zebrafish Development: A Critical Time Window and Resilience. PLoS ONE, 2011, 6, e20037.	2.5	108
65	Zebrafish embryos and larvae: A new generation of disease models and drug screens. Birth Defects Research Part C: Embryo Today Reviews, 2011, 93, 115-133.	3.6	196
66	Analysis of Cardiac Development in the Turtle Emys orbicularis (Testudines: Emidydae) using 3â€Ð Computer Modeling from Histological Sections. Anatomical Record, 2010, 293, 1101-1114.	1.4	11
67	Developmental anatomy of lampreys. Biological Reviews, 2010, 85, 1-33.	10.4	47
68	Translating rodent behavioral repertoire to zebrafish (Danio rerio): Relevance for stress research. Behavioural Brain Research, 2010, 214, 332-342.	2.2	304
69	Frequent Episode Mining to Support Pattern Analysis in Developmental Biology. Lecture Notes in Computer Science, 2010, , 253-263.	1.3	2
70	The Hox Complex - an interview with Denis Duboule. International Journal of Developmental Biology, 2009, 53, 717-723.	0.6	7
71	Pattern formation today. International Journal of Developmental Biology, 2009, 53, 653-658.	0.6	22
72	Zebrafish development and regeneration: new tools for biomedical research. International Journal of Developmental Biology, 2009, 53, 835-850.	0.6	143

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73	Preface to Pattern Formation Special Issue. International Journal of Developmental Biology, 2009, 53, 651-651.	0.6	3
74	Developmental stages until hatching of the Lake Victoria cichlid Haplochromis piceatus (Teleostei:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.2	18
75	Heterochrony in limb evolution: developmental mechanisms and natural selection. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2009, 312B, 639-664.	1.3	57
76	Polymorphism in developmental timing: intraspecific heterochrony in a Lake Victoria cichlid. Evolution & Development, 2009, 11, 625-635.	2.0	29
77	Axial patterning in snakes and caecilians: Evidence for an alternative interpretation of the Hox code. Developmental Biology, 2009, 332, 82-89.	2.0	131
78	Diffusible gradients are out - an interview with Lewis Wolpert. International Journal of Developmental Biology, 2009, 53, 659-662.	0.6	41
79	Molecular tools, classic questions - an interview with Clifford Tabin. International Journal of Developmental Biology, 2009, 53, 725-731.	0.6	5
80	Regeneration and pattern formation - an interview with Susan Bryant. International Journal of Developmental Biology, 2009, 53, 827-833.	0.6	2
81	Evolutionary origin and development of snake fangs. Nature, 2008, 454, 630-633.	27.8	149
82	Serpent clocks tick faster. Nature, 2008, 454, 282-283.	27.8	23
83	Discovery of a Functional Glucocorticoid Receptor Î²-Isoform in Zebrafish. Endocrinology, 2008, 149, 1591-1599.	2.8	144
84	Sequencing and genomic annotation of the chicken <i>(Gallus gallus)</i> Hox clusters, and mapping of evolutionarily conserved regions. Cytogenetic and Genome Research, 2007, 117, 110-119.	1.1	16
85	Forelimb-hindlimb developmental timing changes across tetrapod phylogeny. BMC Evolutionary Biology, 2007, 7, 182.	3.2	93
86	Early evolution of the venom system in lizards and snakes. Nature, 2006, 439, 584-588.	27.8	531
87	Gene expression and digit homology in the chicken embryo wing. Evolution & Development, 2005, 7, 18-28.	2.0	67
88	Genomic annotation and transcriptome analysis of the zebrafish (Danio rerio) hox complex with description of a novel member, hoxb13a. Evolution & Development, 2005, 7, 362-375.	2.0	27
89	Gene expression profiling of the long-term adaptive response to hypoxia in the gills of adult zebrafish. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2005, 289, R1512-R1519.	1.8	186
90	A New Technique for Identifying Sequence Heterochrony. Systematic Biology, 2005, 54, 230-240.	5.6	106

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91	Proximodistal patterning of the limb: insights from evolutionary morphology. Evolution & Development, 2004, 6, 1-5.	2.0	29
92	Is Sequence Heterochrony an Important Evolutionary Mechanism in Mammals?. Journal of Mammalian Evolution, 2003, 10, 335-361.	1.8	56
93	Developmental transformations in a normal series of embryos of the sea lampreyPetromyzon marinus (linnaeus). Journal of Morphology, 2003, 257, 348-363.	1.2	37
94	Developmental constraints in a comparative framework: A test case using variations in phalanx number during amniote evolution. The Journal of Experimental Zoology, 2003, 296B, 8-22.	1.4	81
95	Septation and separation within the outflow tract of the developing heart. Journal of Anatomy, 2003, 202, 327-342.	1.5	114
96	Hotspots for evolution. Nature, 2003, 424, 894-895.	27.8	14
97	Inverting the hourglass: quantitative evidence against the phylotypic stage in vertebrate development. Proceedings of the Royal Society B: Biological Sciences, 2003, 270, 341-346.	2.6	85
98	New directions in comparative embryology and the nature of developmental characters. Animal Biology, 2003, 53, 303-311.	1.0	7
99	Analyzing Developmental Sequences Within a Phylogenetic Framework. Systematic Biology, 2002, 51, 478-491.	5.6	91
100	Extended embryo retention, caecilian oviparity and amniote origins. Journal of Natural History, 2002, 36, 2185-2198.	0.5	17
101	Editorial: Haeckel and modern biology. Theory in Biosciences, 2002, 121, 247-251.	1.4	4
102	From Haeckel to event-pairing: the evolution of developmental sequences. Theory in Biosciences, 2002, 121, 297-320.	1.4	51
103	Haeckel's ABC of evolution and development. Biological Reviews, 2002, 77, 495-528.	10.4	108
104	Analyzing evolutionary patterns in amniote embryonic development*. Evolution & Development, 2002, 4, 292-302.	2.0	79
105	Time, pattern, and heterochrony: a study of hyperphalangy in the dolphin embryo flipper. Evolution & Development, 2002, 4, 435-444.	2.0	89
106	Editorial: Haeckel and Modern Biology. Theory in Biosciences, 2002, 121, 247-251.	1.4	1
107	From Haeckel to event-pairing: the evolution of developmental sequences. Theory in Biosciences, 2002, 121, 297-320.	1.4	12
108	Misexpression of Noggin Leads to Septal Defects in the Outflow Tract of the Chick Heart. Developmental Biology, 2001, 235, 98-109.	2.0	38

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109	Founding Editorial: Embryology â€" An Integrated Approach. Scientific World Journal, The, 2001, 1, 602-604.	2.1	0
110	Development of the human pulmonary vein and its incorporation in the morphologically left atrium. Cardiology in the Young, 2001, 11, 632-642.	0.8	117
111	Limb development in a ?nonmodel? vertebrate, the direct-developing frogEleutherodactylus coqui. The Journal of Experimental Zoology, 2001, 291, 375-388.	1.4	44
112	Septation and valvar formation in the outflow tract of the embryonic chick heart. The Anatomical Record, 2001, 264, 273-283.	1.8	52
113	Comparative methods in developmental biology. Zoology, 2001, 104, 278-283.	1.2	35
114	A question of intent: when is a 'schematic' illustration a fraud?. Nature, 2001, 410, 144-144.	27.8	14
115	Generation and Characterization of Monoclonal Antibodies to the Neural Crest. Hybridoma, 2001, 20, 199-203.	0.6	8
116	Relationship in the chick of the developing pulmonary vein to the embryonic systemic venous sinus. , 2000, 259, 67-75.		27
117	Some problems with typological thinking in evolution and development. Evolution & Development, 1999, 1, 5-7.	2.0	29
118	Vertebrate evolution: The developmental origins of adult variation. BioEssays, 1999, 21, 604-613.	2.5	126
119	What does the human embryo look like, and does it matter?. Lancet, The, 1999, 354, 246-248.	13.7	13
120	Vertebrate evolution: The developmental origins of adult variation. , 1999, 21, 604.		2
121	A treasure house of comparative embryology. International Journal of Developmental Biology, 1999, 43, 591-602.	0.6	23
122	Limb development and evolution: a frog embryo with no apical ectodermal ridge (AER). Journal of Anatomy, 1998, 192, 379-390.	1.5	50
123	Phylotypic stage theory. Trends in Ecology and Evolution, 1998, 13, 158.	8.7	25
124	Morphology of the distal tip of the upper mandible of the ostrich (Struthio camelus) embryo during hatching. British Poultry Science, 1998, 39, 575-578.	1.7	6
125	Haeckel's Embryos. Science, 1998, 279, 1283i-1283.	12.6	4
126	Haeckel, Embryos, and Evolution. Science, 1998, 280, 983c-983.	12.6	41

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127	Haeckel's Embryos, Continued. , 1998, 281, 1285j-1285.		3
128	Somite number and vertebrate evolution. Development (Cambridge), 1998, 125, 151-60.	2.5	40
129	There is no highly conserved embryonic stage in the vertebrates: implications for current theories of evolution and development. Anatomy and Embryology, 1997, 196, 91-106.	1.5	287
130	Symposium on Neural Crest Development. Journal of Anatomy, 1997, 191, 481-481.	1.5	0
131	Overexpression of BMP-2 and BMP-4 alters the size and shape of developing skeletal elements in the chick limb. Mechanisms of Development, 1996, 57, 145-157.	1.7	258
132	The Effect of Overexpression of BMPs and GDFâ€5 on the Development of Chick Limb Skeletal Elements. Annals of the New York Academy of Sciences, 1996, 785, 254-255.	3.8	22
133	Heterochrony and the Phylotypic Period. Developmental Biology, 1995, 172, 412-421.	2.0	173
134	Distribution of pluripotent neural crest cells in the embryo and the role of brain-derived neurotrophic factor in the commitment to the primary sensory neuron lineage. Journal of Neurobiology, 1993, 24, 173-184.	3.6	71
135	Pluripotent Neural Crest Cells in the Developing Skin of the Quail Embryo. Developmental Biology, 1993, 157, 348-358.	2.0	86
136	Pigment patterns in neural crest chimeras constructed from quail and guinea fowl embryos. Developmental Biology, 1991, 143, 309-319.	2.0	22
137	In vitro clonal analysis of progenitor cell patterns in dorsal root and sympathetic ganglia of the quail embryo. Developmental Biology, 1991, 147, 451-459.	2.0	105
138	Quail neural crest cells cannot read positional values in the dorsal trunk feathers of the chicken embryo. Roux's Archives of Developmental Biology, 1991, 199, 397-401.	1.2	2
139	Limb development and evolution: a frog embryo with no apical ectodermal ridge (AER). , 0, .		1