

Graham R Scott

List of Publications by Year in descending order

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118
papers

5,933
citations

81900

39
h-index

82547

72
g-index

125
all docs

125
docs citations

125
times ranked

4796
citing authors

#	ARTICLE	IF	CITATIONS
1	The effects of environmental pollutants on complex fish behaviour: integrating behavioural and physiological indicators of toxicity. <i>Aquatic Toxicology</i> , 2004, 68, 369-392.	4.0	834
2	Phenotypic plasticity and genetic adaptation to high-altitude hypoxia in vertebrates. <i>Journal of Experimental Biology</i> , 2010, 213, 4125-4136.	1.7	347
3	Temperature during embryonic development has persistent effects on thermal acclimation capacity in zebrafish. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 14247-14252.	7.1	263
4	Changes in gene expression in gills of the euryhaline killifish <i>Fundulus heteroclitus</i> after abrupt salinity transfer. <i>American Journal of Physiology - Cell Physiology</i> , 2004, 287, C300-C309.	4.6	207
5	Molecular Evolution of Cytochrome c Oxidase Underlies High-Altitude Adaptation in the Bar-Headed Goose. <i>Molecular Biology and Evolution</i> , 2011, 28, 351-363.	8.9	196
6	Cadmium disrupts behavioural and physiological responses to alarm substance in juvenile rainbow trout (<i>Oncorhynchus mykiss</i>). <i>Journal of Experimental Biology</i> , 2003, 206, 1779-1790.	1.7	169
7	The roller coaster flight strategy of bar-headed geese conserves energy during Himalayan migrations. <i>Science</i> , 2015, 347, 250-254.	12.6	165
8	The trans-Himalayan flights of bar-headed geese (<i>Anser indicus</i>). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9516-9519.	7.1	135
9	Elevated performance: the unique physiology of birds that fly at high altitudes. <i>Journal of Experimental Biology</i> , 2011, 214, 2455-2462.	1.7	128
10	Gene expression after freshwater transfer in gills and opercular epithelia of killifish: insight into divergent mechanisms of ion transport. <i>Journal of Experimental Biology</i> , 2005, 208, 2719-2729.	1.7	120
11	Intraspecific divergence of ionoregulatory physiology in the euryhaline teleost <i>Fundulus heteroclitus</i> : possible mechanisms of freshwater adaptation. <i>Journal of Experimental Biology</i> , 2004, 207, 3399-3410.	1.7	111
12	Adaptive Modifications of Muscle Phenotype in High-Altitude Deer Mice Are Associated with Evolved Changes in Gene Regulation. <i>Molecular Biology and Evolution</i> , 2015, 32, 1962-1976.	8.9	105
13	How Bar-Headed Geese Fly Over the Himalayas. <i>Physiology</i> , 2015, 30, 107-115.	3.1	104
14	High-altitude ancestry and hypoxia acclimation have distinct effects on exercise capacity and muscle phenotype in deer mice. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2015, 308, R779-R791.	1.8	101
15	Tribute to R. G. Boutilier: The effect of size on the physiological and behavioural responses of oscar, <i>Astronotus ocellatus</i> , to hypoxia. <i>Journal of Experimental Biology</i> , 2006, 209, 1197-1205.	1.7	90
16	Flying high: A theoretical analysis of the factors limiting exercise performance in birds at altitude. <i>Respiratory Physiology and Neurobiology</i> , 2006, 154, 284-301.	1.6	88
17	Control of breathing and adaptation to high altitude in the bar-headed goose. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2007, 293, R379-R391.	1.8	87
18	Evolution of muscle phenotype for extreme high altitude flight in the bar-headed goose. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2009, 276, 3645-3653.	2.6	87

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19	Physiological and molecular mechanisms of osmoregulatory plasticity in killifish after seawater transfer. <i>Journal of Experimental Biology</i> , 2008, 211, 2450-2459.	1.7	85
20	Temperature during embryonic development has persistent effects on metabolic enzymes in the muscle of zebrafish. <i>Journal of Experimental Biology</i> , 2014, 217, 1370-80.	1.7	84
21	Distinct physiological strategies are used to cope with constant hypoxia and intermittent hypoxia in killifish (<i>Fundulus heteroclitus</i>). <i>Journal of Experimental Biology</i> , 2015, 218, 1198-211.	1.7	80
22	Evolved changes in the intracellular distribution and physiology of muscle mitochondria in high-altitude native deer mice. <i>Journal of Physiology</i> , 2017, 595, 4785-4801.	2.9	79
23	Life Ascending: Mechanism and Process in Physiological Adaptation to High-Altitude Hypoxia. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2019, 50, 503-526.	8.3	74
24	Plasticity of osmoregulatory function in the killifish intestine: drinking rates, salt and water transport, and gene expression after freshwater transfer. <i>Journal of Experimental Biology</i> , 2006, 209, 4040-4050.	1.7	71
25	Body temperature depression and peripheral heat loss accompany the metabolic and ventilatory responses to hypoxia in low and high altitude birds. <i>Journal of Experimental Biology</i> , 2008, 211, 1326-1335.	1.7	70
26	Evolved Mechanisms of Aerobic Performance and Hypoxia Resistance in High-Altitude Natives. <i>Annual Review of Physiology</i> , 2019, 81, 561-583.	13.1	67
27	Control of breathing and the circulation in high-altitude mammals and birds. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2015, 186, 66-74.	1.8	64
28	Circulatory mechanisms underlying adaptive increases in thermogenic capacity in high-altitude deer mice. <i>Journal of Experimental Biology</i> , 2017, 220, 3616-3620.	1.7	64
29	Regulation of gill transcellular permeability and renal function during acute hypoxia in the Amazonian oscar (<i>Astronotus ocellatus</i>): new angles to the osmorepiratory compromise. <i>Journal of Experimental Biology</i> , 2009, 212, 1949-1964.	1.7	63
30	Respiratory responses to progressive hypoxia in the Amazonian oscar, <i>Astronotus ocellatus</i> . <i>Respiratory Physiology and Neurobiology</i> , 2008, 162, 109-116.	1.6	59
31	Control of breathing and ventilatory acclimatization to hypoxia in deer mice native to high altitudes. <i>Acta Physiologica</i> , 2017, 221, 266-282.	3.8	59
32	Intraspecific variation in gene expression after seawater transfer in gills of the euryhaline killifish <i>Fundulus heteroclitus</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2005, 141, 176-182.	1.8	58
33	Gill morphology and acute hypoxia: responses of mitochondria-rich, pavement, and mucous cells in the Amazonian oscar (<i>Astronotus ocellatus</i>) and the rainbow trout (<i>Oncorhynchus</i>) Tj ETQq1 1 0.784314 rgBT / Overlock 10 T <i>Journal of Zoology</i> , 2011, 89, 307-324.	1.6	56
34	Maladaptive phenotypic plasticity in cardiac muscle growth is suppressed in high-altitude deer mice. <i>Evolution; International Journal of Organic Evolution</i> , 2018, 72, 2712-2727.	2.3	55
35	Rapid regulation of Na ⁺ fluxes and ammonia excretion in response to acute environmental hypoxia in the Amazonian oscar, <i>Astronotus ocellatus</i> . <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2007, 292, R2048-R2058.	1.8	52
36	Mitochondrial physiology and reactive oxygen species production are altered by hypoxia acclimation in killifish (<i>Fundulus heteroclitus</i>). <i>Journal of Experimental Biology</i> , 2016, 219, 1130-8.	1.7	52

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37	Physiological and genomic evidence that selection on the transcription factor <i>Epas1</i> has altered cardiovascular function in high-altitude deer mice. <i>PLoS Genetics</i> , 2019, 15, e1008420.	3.5	52
38	Evolution of physiological performance capacities and environmental adaptation: insights from high-elevation deer mice (<i>Peromyscus maniculatus</i>). <i>Journal of Mammalogy</i> , 2019, 100, 910-922.	1.3	51
39	Interactions between hypoxia tolerance and food deprivation in Amazonian oscars, <i>Astronotus ocellatus</i> (Agassiz). <i>Journal of Experimental Biology</i> , 2013, 216, 4590-600.	1.7	48
40	Effects of spironolactone and RU486 on gene expression and cell proliferation after freshwater transfer in the euryhaline killifish. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2005, 175, 499-510.	1.5	44
41	Acclimation to hypoxia increases carbohydrate use during exercise in high-altitude deer mice. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2017, 312, R400-R411.	1.8	43
42	Metabolic Costs of Exposure to Wastewater Effluent Lead to Compensatory Adjustments in Respiratory Physiology in Bluegill Sunfish. <i>Environmental Science & Technology</i> , 2018, 52, 801-811.	10.0	40
43	Thermal tolerance depends on season, age and body condition in imperilled redbreast sunfish <i>Lepomis microlophus</i> . <i>Environmental Science & Technology</i> , 2020, 54, 1000-1007.		40
44	The Mitochondrial Contribution to Animal Performance, Adaptation, and Life-History Variation. <i>Integrative and Comparative Biology</i> , 2018, 58, 480-485.	2.0	39
45	Physiological tradeoffs may underlie the evolution of hypoxia tolerance and exercise performance in sunfish (Centrarchidae). <i>Journal of Experimental Biology</i> , 2015, 218, 3264-75.	1.7	37
46	Effects of chronic hypoxia on diaphragm function in deer mice native to high altitude. <i>Acta Physiologica</i> , 2018, 223, e13030.	3.8	37
47	Coordinated changes across the O ₂ transport pathway underlie adaptive increases in thermogenic capacity in high-altitude deer mice. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20192750.	2.6	36
48	Municipal wastewater effluent affects fish communities: A multi-year study involving two wastewater treatment plants. <i>Environmental Pollution</i> , 2019, 252, 1730-1741.	7.5	35
49	Divergent respiratory and cardiovascular responses to hypoxia in bar-headed geese and Andean birds. <i>Journal of Experimental Biology</i> , 2017, 220, 4186-4194.	1.7	34
50	Control of respiration in flight muscle from the high-altitude bar-headed goose and low-altitude birds. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2009, 297, R1066-R1074.	1.8	33
51	The Mitochondrial Basis for Adaptive Variation in Aerobic Performance in High-Altitude Deer Mice. <i>Integrative and Comparative Biology</i> , 2018, 58, 506-518.	2.0	33
52	Maximum Running Speed of Captive Bar-Headed Geese Is Unaffected by Severe Hypoxia. <i>PLoS ONE</i> , 2014, 9, e94015.	2.5	30
53	Distinct metabolic adjustments arise from acclimation to constant hypoxia and intermittent hypoxia in estuarine killifish (<i>Fundulus heteroclitus</i>). <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	28
54	Chronic cold exposure induces mitochondrial plasticity in deer mice native to high altitudes. <i>Journal of Physiology</i> , 2020, 598, 5411-5426.	2.9	28

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55	Interspecific and environment-induced variation in hypoxia tolerance in sunfish. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2016, 198, 59-71.	1.8	27
56	Hybridization increases mitochondrial production of reactive oxygen species in sunfish. <i>Evolution; International Journal of Organic Evolution</i> , 2017, 71, 1643-1652.	2.3	27
57	Air breathing and aquatic gas exchange during hypoxia in armoured catfish. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2017, 187, 117-133.	1.5	27
58	Relationship between oxidative stress and brain swelling in goldfish (<i>Carassius auratus</i>) exposed to high environmental ammonia. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2017, 312, R114-R124.	1.8	26
59	Ventilatory acclimatization to hypoxia in mice: Methodological considerations. <i>Respiratory Physiology and Neurobiology</i> , 2017, 235, 95-103.	1.6	26
60	Mitochondrial physiology in the skeletal and cardiac muscles is altered in torrent ducks, <i>Merganetta armata</i> , from high altitudes in the Andes. <i>Journal of Experimental Biology</i> , 2016, 219, 3719-3728.	1.7	24
61	Phenotypic plasticity, genetic assimilation, and genetic compensation in hypoxia adaptation of high-altitude vertebrates. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2021, 253, 110865.	1.8	24
62	Respiratory mechanics of eleven avian species resident at high and low altitude. <i>Journal of Experimental Biology</i> , 2017, 220, 1079-1089.	1.7	23
63	Municipal wastewater as an ecological trap: Effects on fish communities across seasons. <i>Science of the Total Environment</i> , 2021, 759, 143430.	8.0	22
64	Have wing morphology or flight kinematics evolved for extreme high altitude migration in the bar-headed goose?. <i>Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology</i> , 2008, 148, 324-331.	2.6	21
65	In situ exposure to wastewater effluent reduces survival but has little effect on the behaviour or physiology of an invasive Great Lakes fish. <i>Aquatic Toxicology</i> , 2017, 184, 37-48.	4.0	21
66	The Role of Size in Synchronous Air Breathing of <i>Hoplosternum littorale</i> . <i>Physiological and Biochemical Zoology</i> , 2009, 82, 625-634.	1.5	20
67	Amphibious fish jump better on land after acclimation to a terrestrial environment. <i>Journal of Experimental Biology</i> , 2016, 219, 3204-3207.	1.7	20
68	Effects of hypoxia at different life stages on locomotory muscle phenotype in deer mice native to high altitudes. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2018, 224, 98-104.	1.6	20
69	Metabolic implications of exposure to wastewater effluent in bluegill sunfish. <i>Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology</i> , 2019, 224, 108562.	2.6	20
70	Ontogenesis of evolved changes in respiratory physiology in deer mice native to high altitude. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	17
71	Evolved changes in breathing and CO ₂ sensitivity in deer mice native to high altitudes. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2018, 315, R1027-R1037.	1.8	16
72	Fish living near two wastewater treatment plants have unaltered thermal tolerance but show changes in organ and tissue traits. <i>Journal of Great Lakes Research</i> , 2021, 47, 522-533.	1.9	15

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73	Convergent changes in muscle metabolism depend on duration of high-altitude ancestry across Andean waterfowl. <i>ELife</i> , 2020, 9, .	6.0	15
74	Ventilatory roll off during sustained hypercapnia is gender specific in pekin ducks. <i>Respiratory Physiology and Neurobiology</i> , 2007, 156, 47-60.	1.6	14
75	Life history predicts flight muscle phenotype and function in birds. <i>Journal of Animal Ecology</i> , 2020, 89, 1262-1276.	2.8	14
76	Evolution and developmental plasticity of lung structure in high-altitude deer mice. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2021, 191, 385-396.	1.5	14
77	Point: High Altitude is for the Birds!. <i>Journal of Applied Physiology</i> , 2011, 111, 1514-1515.	2.5	13
78	Biochemical correlates of aggressive behavior in the <i>Sicyopterus japonicus</i> fighting fish. <i>Journal of Zoology</i> , 2015, 297, 99-107.	1.7	13
79	Tackling the Tibetan Plateau in a down suit: insights into thermoregulation by bar-headed geese during migration. <i>Journal of Experimental Biology</i> , 2019, 222, .	1.7	13
80	The adaptive benefit of evolved increases in hemoglobin-O ₂ affinity is contingent on tissue O ₂ diffusing capacity in high-altitude deer mice. <i>BMC Biology</i> , 2021, 19, 128.	3.8	13
81	Interspecific variation in hypoxia tolerance and hypoxia acclimation responses in killifish from the family Fundulidae. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	13
82	Regulation of catecholamine release from the adrenal medulla is altered in deer mice (<i>Peromyscus</i>). <i>Comparative Physiology</i> , 2019, 317, R407-R417.	1.8	12
83	Nesting on high: reproductive and physiological consequences of breeding across an intertidal gradient. <i>Evolutionary Ecology</i> , 2019, 33, 21-36.	1.2	11
84	Control of breathing and respiratory gas exchange in ducks native to high altitude in the Andes. <i>Journal of Experimental Biology</i> , 2019, 222, .	1.7	11
85	Hypoxia acclimation alters reactive oxygen species homeostasis and oxidative status in estuarine killifish (<i>Fundulus heteroclitus</i>). <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	11
86	Cardiovascular responses to progressive hypoxia in ducks native to high altitude in the Andes. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	11
87	Astrocyte-mediated disruption of ROS homeostasis in Fragile X mouse model. <i>Neurochemistry International</i> , 2021, 146, 105036.	3.8	10
88	Physiological insight into the evolution of complex phenotypes: aerobic performance and the O ₂ transport pathway of vertebrates. <i>Journal of Experimental Biology</i> , 2021, 224, .	1.7	9
89	Choosing source populations for conservation reintroductions: lessons from variation in thermal tolerance among populations of the imperilled redbreasted sunfish. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2021, 78, 1347-1355.	1.4	9
90	Do Bar-Headed Geese Train for High Altitude Flights?. <i>Integrative and Comparative Biology</i> , 2017, 57, 240-251.	2.0	8

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91	The Preference for Social Affiliation Renders Fish Willing to Accept Lower O ₂ Levels. <i>Physiological and Biochemical Zoology</i> , 2018, 91, 716-724.	1.5	8
92	Life-long exposure to hypoxia affects metabolism and respiratory physiology across life stages in high-altitude deer mice (<i>Peromyscus maniculatus</i>). <i>Journal of Experimental Biology</i> , 2021, 224, .	1.7	8
93	Exposure to wastewater effluent disrupts hypoxia responses in killifish (<i>Fundulus heteroclitus</i>). <i>Environmental Pollution</i> , 2021, 284, 117373.	7.5	8
94	Evolution of salinity tolerance from transcriptome to physiological system. <i>Molecular Ecology</i> , 2013, 22, 3656-3658.	3.9	7
95	Validation of a Pulse Oximetry System for High-Altitude Waterfowl by Examining the Hypoxia Responses of the Andean Goose (<i>Chloephaga melanoptera</i>). <i>Physiological and Biochemical Zoology</i> , 2018, 91, 859-867.	1.5	7
96	Parental Males of the Plainfin Midshipman Are Physiologically Resilient to the Challenges of the Intertidal Zone. <i>Physiological and Biochemical Zoology</i> , 2020, 93, 111-128.	1.5	7
97	Pulmonary hypertension is attenuated and ventilation-perfusion matching is maintained during chronic hypoxia in deer mice native to high altitude. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2021, 320, R800-R811.	1.8	7
98	Flying High: The Unique Physiology of Birds that Fly at High Altitudes. , 2017, , 113-128.		6
99	Distinct Mechanisms Underlie Developmental Plasticity and Adult Acclimation of Thermogenic Capacity in High-Altitude Deer Mice. <i>Frontiers in Physiology</i> , 2021, 12, 718163.	2.8	6
100	Rapid and reversible modulation of blood haemoglobin content during diel cycles of hypoxia in killifish (<i>Fundulus heteroclitus</i>). <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2021, 261, 111054.	1.8	6
101	Genetic variation in haemoglobin is associated with evolved changes in breathing in high-altitude deer mice. <i>Journal of Experimental Biology</i> , 2022, 225, .	1.7	6
102	Adrenergic control of the cardiovascular system in deer mice native to high altitude. <i>Current Research in Physiology</i> , 2022, 5, 83-92.	1.7	5
103	Adaptive increases in respiratory capacity and O ₂ affinity of subsarcolemmal mitochondria from skeletal muscle of high-altitude deer mice. <i>FASEB Journal</i> , 2022, 36, .	0.5	5
104	Genetic variation in HIF ^{1α} attenuates ventilatory sensitivity and carotid body growth in chronic hypoxia in high-altitude deer mice. <i>Journal of Physiology</i> , 2022, 600, 4207-4225.	2.9	5
105	Proximity to wastewater effluent alters behaviour in bluegill sunfish (<i>Lepomis macrochirus</i>). <i>Behaviour</i> , 2019, 156, 1495-1517.	0.8	4
106	Commentary: Hierarchical reductionism approach to understanding adaptive variation in animal performance. <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2021, 256, 110636.	1.6	3
107	Early insights into the evolution of respiratory and cardiovascular physiology in vertebrates. <i>Journal of Experimental Biology</i> , 2015, 218, 2818-2820.	1.7	2
108	Temperature modulates the impacts of wastewater exposure on the physiology and behaviour of fathead minnow. <i>Chemosphere</i> , 2022, 294, 133738.	8.2	2

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109	Flight muscle and heart phenotypes in the high-flying ruddy shelduck. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2021, 191, 563-573.	1.5	1
110	SIMPLE STEPS TO BUILDING A LUNG. <i>Journal of Experimental Biology</i> , 2008, 211, v-vi.	1.7	0
111	Last Word on Point:Counterpoint: High altitude is/is not for the birds!. <i>Journal of Applied Physiology</i> , 2011, 111, 1525-1525.	2.5	0
112	Characterizing the influence of chronic hypobaric hypoxia on diaphragmatic myofilament contractile function and phosphorylation in high-altitude deer mice and low-altitude white-footed mice. <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2019, 189, 489-499.	1.5	0
113	Control of mitochondrial respiration in flight muscle of bar-headed geese. <i>FASEB Journal</i> , 2008, 22, 757.8.	0.5	0
114	Oxygen dependence of mitochondrial respiration in high and low altitude birds. <i>FASEB Journal</i> , 2009, 23, 598.14.	0.5	0
115	Embryonic temperature produces persistent effects on the capacity for thermal acclimation in adult zebrafish. <i>FASEB Journal</i> , 2012, 26, 1072.5.	0.5	0
116	Control of Breathing and Adaptation to High-Altitude Hypoxia in Deer Mice (<i>Peromyscus maniculatus</i>). <i>FASEB Journal</i> , 2015, 29, 686.4.	0.5	0
117	Physiological Tradeoffs Underlie the Evolution of Hypoxia Tolerance and Exercise Performance in Fish. <i>FASEB Journal</i> , 2015, 29, 982.4.	0.5	0
118	High-Altitude Adaptation and Hypoxia Signaling in Deer Mice. <i>FASEB Journal</i> , 2017, 31, 1075.2.	0.5	0