Matti Vornanen

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89 papers	2,102 citations	26 h-index	40 g-index
92 ext. papers	2,368 ext. citations	2.9 avg, IF	5.5 L-index

#	Paper	IF	Citations
89	Temperature dependence of SERCA activity in thermally acclimated freshwater mussels Anodonta anatina and Unio tumidus (Bivalvia: Unionidae). *Aquaculture*, **2022**, 555, 738188	4.4	
88	Ionic currents underlying different patterns of electrical activity in working cardiac myocytes of mammals and non-mammalian vertebrates.. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2022**, 111204	2.6	1
87	Effects of Na+ channel isoforms and cellular environment on temperature tolerance of cardiac Na+ current in zebrafish (Danio rerio) and rainbow trout (Oncorhynchus mykiss). *Journal of Experimental Biology*, **2021**, 224,	3	1
86	Effects of acute warming on cardiac and myotomal sarco(endo)plasmic reticulum ATPase (SERCA) of thermally acclimated brown trout (Salmo trutta). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2021**, 191, 43-53	2.2	2
85	Ionic basis of atrioventricular conduction: ion channel expression and sarcolemmal ion currents of the atrioventricular canal of the rainbow trout (Oncorhynchus mykiss) heart. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2021**, 191, 327-346	2.2	3
84	Cardiac Toxicity of Cadmium Involves Complex Interactions Among Multiple Ion Currents in Rainbow Trout (Oncorhynchus mykiss) Ventricular Myocytes. *Environmental Toxicology and Chemistry*, **2021**, 40, 2874-2885	3.8	0
83	Reduced ventricular excitability causes atrioventricular block and depression of heart rate in fish at critically high temperatures. *Journal of Experimental Biology*, **2020**, 223,	3	21
82	Feeling the heat: source-sink mismatch as a mechanism underlying the failure of thermal tolerance. *Journal of Experimental Biology*, **2020**, 223,	3	14
81	Temperature and external K dependence of electrical excitation in ventricular myocytes of cod-like fishes. *Journal of Experimental Biology*, **2019**, 222,	3	9
80	Polycyclic Aromatic Hydrocarbons Phenanthrene and Retene Modify the Action Potential via Multiple Ion Currents in Rainbow Trout Oncorhynchus mykiss Cardiac Myocytes. *Environmental Toxicology and Chemistry*, **2019**, 38, 2145-2153	3.8	13
79	Transcript expression of inward rectifier potassium channels of Kir2 subfamily in Arctic marine and freshwater fish species. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2019**, 189, 735-749	2.2	2
78	Cardiac voltage-gated sodium channel expression and electrophysiological characterization of the sodium current in the zebrafish (Danio rerio) ventricle. *Progress in Biophysics and Molecular Biology*, **2018**, 138, 59-68	4.7	11
77	Effects of seasonal acclimatization on thermal tolerance of inward currents in roach (Rutilus rutilus) cardiac myocytes. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2018**, 188, 255-269	2.2	8
76	Expression of calcium channel transcripts in the zebrafish heart: dominance of T-type channels. *Journal of Experimental Biology*, **2018**, 221,	3	15
75	Transcripts of Kv7.1 and MinK channels and slow delayed rectifier K current (I) are expressed in zebrafish (Danio rerio) heart. *Pflugers Archiv European Journal of Physiology*, **2018**, 470, 1753-1764	4.6	13
74	Electrical excitability of roach (Rutilus rutilus) ventricular myocytes: effects of extracellular K, temperature, and pacing frequency. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2018**, 315, R303-R311	3.2	7
73	Na/K-ATPase activity in the anoxic turtle (Trachemys scripta) brain at different acclimation temperature. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2017**, 206, 11-16	2.6	15

72	Maximum heart rate in brown trout (Salmo trutta fario) is not limited by firing rate of pacemaker cells. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2017**, 312, R165-R171	3.2	13
71	Effects of seasonal acclimatization on action potentials and sarcolemmal K currents in roach (Rutilus rutilus) cardiac myocytes. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2017**, 205, 15-27	2.6	11
70	Electrical Excitability of the Fish Heart and Its Autonomic Regulation. *Fish Physiology*, **2017**, 36, 99-153	2	15
69	Effects of prolonged anoxia on electrical activity of the heart in crucian carp (Carassius carassius). *Journal of Experimental Biology*, **2017**, 220, 445-454	3	12
68	Small functional current in sinoatrial pacemaker cells of the brown trout () heart despite strong expression of HCN channel transcripts. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2017**, 313, R711-R722	3.2	8
67	Seasonal changes of cholinergic response in the atrium of Arctic navaga cod (Eleginus navaga). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2017**, 187, 329-338	2.2	13
66	The temperature dependence of electrical excitability in fish hearts. *Journal of Experimental Biology* , **2016**, 219, 1941-52	3	51
65	Glycogen dynamics of crucian carp (Carassius carassius) in prolonged anoxia. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2016**, 186, 999-1007	2.2	7
64	Zebrafish heart as a model for human cardiac electrophysiology. *Channels*, **2016**, 10, 101-10	3	79
63	Deltamethrin is toxic to the fish (crucian carp, Carassius carassius) heart. *Pesticide Biochemistry and Physiology*, **2016**, 129, 36-42	4.9	27
62	Lowering Temperature is the Trigger for Glycogen Build-Up and Winter Fasting in Crucian Carp (Carassius carassius). *Zoological Science*, **2016**, 33, 83-91	0.8	8
61	Molecular basis and drug sensitivity of the delayed rectifier (IKr) in the fish heart. *Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology*, **2015**, 176-177, 44-51	3.2	6
60	Inward rectifier potassium current (I K1) and Kir2 composition of the zebrafish (Danio rerio) heart. *Pflugers Archiv European Journal of Physiology*, **2015**, 467, 2437-46	4.6	25
59	Seasonal acclimatization of the cardiac potassium currents (IK1 and IKr) in an arctic marine teleost, the navaga cod (Eleginus navaga). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2015**, 185, 883-90	2.2	23
58	A new potassium ion current induced by stimulation of M2 cholinoreceptors in fish atrial myocytes. *Journal of Experimental Biology*, **2014**, 217, 1745-51	3	5
57	Seasonal acclimatization of the cardiac action potential in the Arctic navaga cod (Eleginus navaga, Gadidae). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2014**, 184, 319-27	2.2	16
56	Species- and chamber-specific responses of 12 kDa FK506-binding protein to temperature in fish heart. *Fish Physiology and Biochemistry*, **2014**, 40, 539-49	2.7	10
55	Effects of deltamethrin on excitability and contractility of the rainbow trout (Oncorhynchus mykiss) heart. *Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology*, **2014**, 159, 1-9	3.2	8

54	Inhibition of the cardiac ATP-dependent potassium current by KB-R7943. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2014**, 175, 38-45	2.6	14
53	Electrical excitability of the heart in a Chondrostei fish, the Siberian sturgeon (Acipenser baerii). *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2014**, 307, R1157-66	3.2	6
52	Electrical excitation of the heart in a basal vertebrate, the European river lamprey (Lampetra fluviatilis). *Physiological and Biochemical Zoology*, **2014**, 87, 817-28	2	13
51	Acute heat tolerance of cardiac excitation in the brown trout (Salmo trutta fario). *Journal of Experimental Biology*, **2014**, 217, 299-309	3	50
50	Comparison of Smoltification in Atlantic Salmon (Salmo salar) from Anadromous and Landlocked Populations Under Common Garden Conditions. *Annales Zoologici Fennici*, **2013**, 50, 1-15	0.9	18
49	Temperature dependence of sarco(endo)plasmic reticulum Ca2+ ATPase expression in fish hearts. *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2013**, 183, 467-76	2.2	17
48	Inhibition of the cardiac inward rectifier potassium currents by KB-R7943. *Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology*, **2013**, 158, 181-6	3.2	8
47	A significant role of sarcoplasmic reticulum in cardiac contraction of a basal vertebrate, the river lamprey (Lampetra fluviatilis). *Acta Physiologica*, **2013**, 207, 269-79	5.6	12
46	Comparison of Gene Expression in the Gill of Salmon (Salmo salar) Smolts from Anadromous and Landlocked Populations. *Annales Zoologici Fennici*, **2013**, 50, 16-35	0.9	15
45	Expression of SERCA and phospholamban in rainbow trout (Oncorhynchus mykiss) heart: comparison of atrial and ventricular tissue and effects of thermal acclimation. *Journal of Experimental Biology*, **2012**, 215, 1162-9	3	31
44	Tetrodotoxin sensitivity of the vertebrate cardiac Na+ current. *Marine Drugs*, **2011**, 9, 2409-22	6	25
43	Seasonality of glycogen phosphorylase activity in crucian carp (Carassius carassius L.). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2011**, 181, 917-26	2.2	9
42	Body mass dependence of glycogen stores in the anoxia-tolerant crucian carp (Carassius carassius L.). *Die Naturwissenschaften*, **2011**, 98, 225-32	2	16
41	Thermal adaptation of the crucian carp (Carassius carassius) cardiac delayed rectifier current, IKs, by homomeric assembly of Kv7.1 subunits without MinK. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2011**, 301, R255-65	3.2	9
40	Sinoatrial tissue of crucian carp heart has only negative contractile responses to autonomic agonists. *BMC Physiology*, **2010**, 10, 10	0	17
39	Comparison of sarcoplasmic reticulum calcium content in atrial and ventricular myocytes of three fish species. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2009**, 297, R1180-7	3.2	23
38	Expression of calsequestrin in atrial and ventricular muscle of thermally acclimated rainbow trout. *Journal of Experimental Biology*, **2009**, 212, 3403-14	3	17
37	Responses of action potential and K+ currents to temperature acclimation in fish hearts: phylogeny or thermal preferences?. *Physiological and Biochemical Zoology*, **2009**, 82, 468-82	2	65

36	Chapter 9 The Anoxia-Tolerant Crucian Carp (Carassius Carassius L.). *Fish Physiology*, **2009**, 27, 397-441	2	40
35	A novel inwardly rectifying K+ channel, Kir2.5, is upregulated under chronic cold stress in fish cardiac myocytes. *Journal of Experimental Biology*, **2008**, 211, 2162-71	3	27
34	Seasonal acclimatization of brain lipidome in a eurythermal fish (Carassius carassius) is mainly determined by temperature. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2008**, 294, R1716-28	3.2	20
33	Effect of temperature and prolonged anoxia exposure on electrophysiological properties of the turtle (Trachemys scripta) heart. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2007**, 293, R421-37	3.2	22
32	Cloning and expression of cardiac Kir2.1 and Kir2.2 channels in thermally acclimated rainbow trout. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2007**, 292, R2328-39	3.2	21
31	Temperature acclimation modifies sinoatrial pacemaker mechanism of the rainbow trout heart. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2007**, 292, R1023-32	3.2	56
30	Seasonal changes in glycogen content and Na+-K+-ATPase activity in the brain of crucian carp. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2006**, 291, R1482-9	3.2	31
29	Temperature and Ca2+ dependence of [3H]ryanodine binding in the burbot (Lota lota L.) heart. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2006**, 290, R345-51	3.2	19
28	Significance of Na+ current in the excitability of atrial and ventricular myocardium of the fish heart. *Journal of Experimental Biology*, **2006**, 209, 549-57	3	28
27	Sarcolemmal ion currents and sarcoplasmic reticulum Ca2+ content in ventricular myocytes from the cold stenothermic fish, the burbot (Lota lota). *Journal of Experimental Biology*, **2006**, 209, 3091-100	3	34
26	A mutation of ion-conducting pore without effect on ion selectivity of the sodium channel. *Acta Physiologica Scandinavica*, **2005**, 185, 257		
25	Steady-state effects of temperature acclimation on the transcriptome of the rainbow trout heart. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2005**, 289, R1177-84	3.2	87
24	Temperature acclimation modifies Na+ current in fish cardiac myocytes. *Journal of Experimental Biology*, **2004**, 207, 2823-33	3	36
23	Seasonality of dihydropyridine receptor binding in the heart of an anoxia-tolerant vertebrate, the crucian carp (Carassius carassius L.). *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2004**, 287, R1263-9	3.2	15
22	Regulation of action potential duration under acute heat stress by I(K,ATP) and I(K1) in fish cardiac myocytes. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2004**, 286, R405-15	3.2	19
21	Does different thyroid state effect on the contractility of the cardiac muscle of eurythermal fish species, rainbow trout (Oncorhynchus mykiss, Walbaum)?. *Journal of Thermal Biology*, **2003**, 28, 35-42	2.9	11
20	Temperature-dependent expression of sarcolemmal K(+) currents in rainbow trout atrial and ventricular myocytes. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2002**, 282, R1191-9	3.2	54
19	The force-frequency relationship in fish hearts--a review. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2002**, 132, 811-26	2.6	94

18	Plasticity of excitation-contraction coupling in fish cardiac myocytes. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2002**, 132, 827-46	2.6	118
17	The induction of an ATP-sensitive K(+) current in cardiac myocytes of air- and water-breathing vertebrates. *Pflugers Archiv European Journal of Physiology*, **2002**, 444, 760-70	4.6	26
16	Electrophysiological properties of rainbow trout cardiac myocytes in serum-free primary culture. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2002**, 282, R1200-9	3.2	10
15	Regulation of cardiac contractility in a cold stenothermal fish, the burbotLota lotaL.. *Journal of Experimental Biology*, **2002**, 205, 1597-1606	3	49
14	Temperature dependence of cardiac sarcoplasmic reticulum function in rainbow trout myocytes. *Journal of Experimental Biology*, **2002**, 205, 3631-3639	3	39
13	Effects of temperature on intracellular [Ca2+] in trout atrial myocytes. *Journal of Experimental Biology*, **2002**, 205, 3641-3650	3	38
12	Regulation of cardiac contractility in a cold stenothermal fish, the burbot Lota lota L. *Journal of Experimental Biology*, **2002**, 205, 1597-606	3	34
11	Temperature dependence of cardiac sarcoplasmic reticulum function in rainbow trout myocytes. *Journal of Experimental Biology*, **2002**, 205, 3631-9	3	24
10	Effects of temperature on intracellular Ca2+ in trout atrial myocytes. *Journal of Experimental Biology*, **2002**, 205, 3641-50	3	30
9	Cold acclimation increases basal heart rate but decreases its thermal tolerance in rainbow trout (Oncorhynchus mykiss). *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology*, **2001**, 171, 173-9	2.2	76
8	Effects of acute anoxia on heart function in crucian carp: importance of cholinergic and purinergic control. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **1999**, 277, R465-75	3.2	19
7	Effects of thermal acclimation on the relaxation system of crucian carp white myotomal muscle. *The Journal of Experimental Zoology*, **1999**, 284, 241-251		13
6	Excitation-contraction coupling of the developing rat heart. *Molecular and Cellular Biochemistry*, **1996**, 163-164, 5-11	4.2	14
5	Fiber types and myosin heavy chain composition in muscles of common shrew (Sorex araneus). *The Journal of Experimental Zoology*, **1995**, 271, 27-35		21
4	Seasonal adaptation of crucian carp (Carassius carassius L.) heart: glycogen stores and lactate dehydrogenase activity. *Canadian Journal of Zoology*, **1994**, 72, 433-442	1.5	37
3	Effect of Season and Temperature Acclimation on the Function of Crucian Carp (Carassius Carassius) Heart. *Journal of Experimental Biology*, **1992**, 167, 203-220	3	73
2	Regulation of contractility of the fish (Carassius carassius L.) heart ventricle. *Comparative Biochemistry and Physiology Part C: Comparative Pharmacology*, **1989**, 94, 477-483		28
1	Depression of heart rate in fish at critically high temperatures is due to atrioventricular block		2