William E Louch

List of Publications by Year
in descending order

108 papers	4,396 citations	94269 37 h-index	118652 62 g-index
111 all docs	111 docs citations	111 times ranked	5405 citing authors

#	Article	IF	Citations
1	Methods in cardiomyocyte isolation, culture, and gene transfer. Journal of Molecular and Cellular Cardiology, 2011, 51, 288-298.	0.9	407
2	Thyroid and Glucocorticoid Hormones Promote Functional T-Tubule Development in Human-Induced Pluripotent Stem Cellâ€"Derived Cardiomyocytes. Circulation Research, 2017, 121, 1323-1330.	2.0	286
3	Reduced synchrony of Ca2+ release with loss of T-tubulesâ€"a comparison to Ca2+ release in human failing cardiomyocytes. Cardiovascular Research, 2004, 62, 63-73.	1.8	265
4	T-tubule disorganization and reduced synchrony of Ca2+release in murine cardiomyocytes following myocardial infarction. Journal of Physiology, 2006, 574, 519-533.	1.3	227
5	A Dominant STIM1 Mutation Causes Stormorken Syndrome. Human Mutation, 2014, 35, 556-564.	1.1	143
6	Moderate heart dysfunction in mice with inducible cardiomyocyte-specific excision of the Serca2 gene. Journal of Molecular and Cellular Cardiology, 2009, 47, 180-187.	0.9	128
7	Remodeling of secretory lysosomes during education tunes functional potential in NK cells. Nature Communications, 2019, 10, 514.	5.8	103
8	Elevated ventricular wall stress disrupts cardiomyocyte t-tubule structure and calcium homeostasis. Cardiovascular Research, 2016, 112, 443-451.	1.8	94
9	Syndecan-4 is a key determinant of collagen cross-linking and passive myocardial stiffness in the pressure-overloaded heart. Cardiovascular Research, 2015, 106, 217-226.	1.8	87
10	Sodium accumulation promotes diastolic dysfunction in end-stage heart failure following<i>Serca2</i>knockout. Journal of Physiology, 2010, 588, 465-478.	1.3	85
11	There Goes the Neighborhood: Pathological Alterations in T-Tubule Morphology and Consequences for Cardiomyocyte Handling. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-17.	3.0	85
12	Ryanodine receptor dispersion disrupts Ca2+ release in failing cardiac myocytes. ELife, 2018, 7, .	2.8	84
13	Targeting Cardiomyocyte Ca²⁺ Homeostasis in Heart Failure. Current Pharmaceutical Design, 2014, 21, 431-448.	0.9	83
14	Altered Na+/Ca2+-exchanger activity due to downregulation of Na+/K+-ATPase Â2-isoform in heart failure. Cardiovascular Research, 2008, 78, 71-78.	1.8	82
15	Variable t-tubule organization and Ca2+ homeostasis across the atria. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H609-H620.	1.5	80
16	An analysis of deformationâ€dependent electromechanical coupling in the mouse heart. Journal of Physiology, 2012, 590, 4553-4569.	1.3	73
17	Syndecan-4 Is Essential for Development of Concentric Myocardial Hypertrophy via Stretch-Induced Activation of the Calcineurin-NFAT Pathway. PLoS ONE, 2011, 6, e28302.	1.1	72
18	Calcium signalling in developing cardiomyocytes: implications for model systems and disease. Journal of Physiology, 2015, 593, 1047-1063.	1.3	66

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19	No Rest for the Weary: Diastolic Calcium Homeostasis in the Normal and Failing Myocardium. Physiology, 2012, 27, 308-323.	1.6	64
20	Species-Dependent Mechanisms of Cardiac Arrhythmia: A Cellular Focus. Clinical Medicine Insights: Cardiology, 2017, 11, 117954681668606.	0.6	64
21	Slow Ca2+ sparks de-synchronize Ca2+ release in failing cardiomyocytes: Evidence for altered configuration of Ca2+ release units?. Journal of Molecular and Cellular Cardiology, 2013, 58, 41-52.	0.9	59
22	Contribution of the Na+/Ca2+ Exchanger to Rapid Ca2+ Release in Cardiomyocytes. Biophysical Journal, 2006, 91, 779-792.	0.2	57
23	Extreme sarcoplasmic reticulum volume loss and compensatory T-tubule remodeling after <i>Serca2</i> knockout. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3997-4001.	3.3	56
24	A SERCA2 pump with an increased Ca2+ affinity can lead to severe cardiac hypertrophy, stress intolerance and reduced life span. Journal of Molecular and Cellular Cardiology, 2006, 41, 308-317.	0.9	54
25	Increased passive stiffness promotes diastolic dysfunction despite improved Ca2+ handling during left ventricular concentric hypertrophy. Cardiovascular Research, 2017, 113, 1161-1172.	1.8	54
26	Etiology-Dependent Impairment of Diastolic Cardiomyocyte Calcium Homeostasis in HeartÂFailure With Preserved Ejection Fraction. Journal of the American College of Cardiology, 2021, 77, 405-419.	1.2	54
27	Dyadic Plasticity in Cardiomyocytes. Frontiers in Physiology, 2018, 9, 1773.	1.3	48
28	Slowing of cardiomyocyte Ca2+ release and contraction during heart failure progression in postinfarction mice. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 296, H1069-H1079.	1.5	46
29	Reduced SERCA2 abundance decreases the propensity for Ca2+ wave development in ventricular myocytes. Cardiovascular Research, 2010, 86, 63-71.	1.8	46
30	Deranged sodium to sudden death. Journal of Physiology, 2015, 593, 1331-1345.	1.3	46
31	Secretoneurin Is a Novel Prognostic Cardiovascular Biomarker Associated With Cardiomyocyte Calcium Handling. Journal of the American College of Cardiology, 2015, 65, 339-351.	1.2	45
32	NEIL3-Dependent Regulation of Cardiac Fibroblast Proliferation Prevents Myocardial Rupture. Cell Reports, 2017, 18, 82-92.	2.9	45
33	IL-33 (Interleukin 33)/sST2 Axis in Hypertension and Heart Failure. Hypertension, 2018, 72, 818-828.	1.3	44
34	Increased cardiomyocyte function and Ca2+ transients in mice during early congestive heart failure. Journal of Molecular and Cellular Cardiology, 2007, 43, 177-186.	0.9	43
35	Cardiomyocyte substructure reverts to an immature phenotype during heart failure. Journal of Physiology, 2019, 597, 1833-1853.	1.3	43
36	3D dSTORM imaging reveals novel detail of ryanodine receptor localization in rat cardiac myocytes. Journal of Physiology, 2019, 597, 399-418.	1.3	42

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37	Control of Ca2+ Release by Action Potential Configuration in Normal and Failing Murine Cardiomyocytes. Biophysical Journal, 2010, 99, 1377-1386.	0.2	41
38	Regulation of Cardiomyocyte T-Tubular Structure: Opportunities for Therapy. Current Heart Failure Reports, 2017, 14, 167-178.	1.3	40
39	Sodium Accumulation in SERCA Knockout-Induced Heart Failure. Biophysical Journal, 2012, 102, 2039-2048.	0.2	39
40	Synchrony of Cardiomyocyte Ca2+ Release is Controlled by t-tubule Organization, SR Ca2+ Content, and Ryanodine Receptor Ca2+ Sensitivity. Biophysical Journal, 2013, 104, 1685-1697.	0.2	39
41	Hypokalaemia induces Ca²⁺ overload and Ca²⁺ waves in ventricular myocytes by reducing Na⁺,K⁺â€ATPase Î±₂ activity. Journal of Physiology, 2015, 593, 1509-1521.	1.3	38
42	Human ISL1+ Ventricular Progenitors Self-Assemble into an InÂVivo Functional Heart Patch and Preserve Cardiac Function Post Infarction. Molecular Therapy, 2018, 26, 1644-1659.	3.7	38
43	Slow contractions characterize failing rat hearts. Basic Research in Cardiology, 2008, 103, 328-344.	2.5	35
44	The calciumâ€“frequency response in the rat ventricular myocyte: an experimental and modelling study. Journal of Physiology, 2016, 594, 4193-4224.	1.3	35
45	Inhibition of SMAD2 phosphorylation preserves cardiac function during pressure overload. Cardiovascular Research, 2012, 93, 100-110.	1.8	31
46	Predicting left ventricular contractile function via Gaussian process emulation in aortic-banded rats. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190334.	1.6	31
47	Hypokalemia Promotes Arrhythmia by Distinct Mechanisms in Atrial and Ventricular Myocytes. Circulation Research, 2020, 126, 889-906.	2.0	31
48	Glycosylated Chromogranin A in Heart Failure. Circulation: Heart Failure, 2017, 10, .	1.6	28
49	Mice carrying a conditional Serca2flox allele for the generation of Ca2+ handling-deficient mouse models. Cell Calcium, 2009, 46, 219-225.	1.1	27
50	The Physiology and Pathophysiology of T-Tubules in the Heart. Frontiers in Physiology, 2021, 12, 718404.	1.3	27
51	AKAP18Î´ Anchors and Regulates CaMKII Activity at Phospholamban-SERCA2 and RYR. Circulation Research, 2022, 130, 27-44.	2.0	27
52	Calcium Dynamics in the Ventricular Myocytes of SERCA2 Knockout Mice: A Modeling Study. Biophysical Journal, 2011, 100, 322-331.	0.2	26
53	Full-length cardiac Na⁺/Ca²⁺ exchanger 1 protein is not phosphorylated by protein kinase A. American Journal of Physiology - Cell Physiology, 2011, 300, C989-C997.	2.1	26
54	Electrolyte imbalances in an unselected population in an emergency department: A retrospective cohort study. PLoS ONE, 2019, 14, e0215673.	1.1	26

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55	Cardiomyocyte-specific disruption of Serca2 in adult mice causes sarco(endo)plasmic reticulum stress and apoptosis. Cell Calcium, 2011, 49, 201-207.	1.1	25
56	Ca2+ wave probability is determined by the balance between SERCA2-dependent Ca2+ reuptake and threshold SR Ca2+ content. Cardiovascular Research, 2011, 90, 503-512.	1.8	25
57	Computational modeling of Takotsubo cardiomyopathy: effect of spatially varying Î²-adrenergic stimulation in the rat left ventricle. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H1487-H1496.	1.5	24
58	Phospholamban antisense oligonucleotides improve cardiac function in murine cardiomyopathy. Nature Communications, 2021, 12, 5180.	5.8	24
59	Regional diastolic dysfunction in post-infarction heart failure: role of local mechanical load and SERCA expression. Cardiovascular Research, 2019, 115, 752-764.	1.8	22
60	Bromine inhalation mimics ischemia-reperfusion cardiomyocyte injury and calpain activation in rats. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 316, H212-H223.	1.5	22
61	Syndecan-3 and TFPI Colocalize on the Surface of Endothelial-, Smooth Muscle-, and Cancer Cells. PLoS ONE, 2015, 10, e0117404.	1.1	21
62	Beta-Adrenergic Stimulation Maintains Cardiac Function in Serca2 Knockout Mice. Biophysical Journal, 2013, 104, 1349-1356.	0.2	17
63	Impaired left ventricular mechanical and energetic function in mice after cardiomyocyte-specific excision of <i>Serca2</i>. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 306, H1018-H1024.	1.5	17
64	Remodeling Promotes Proarrhythmic Disruption of Calcium Homeostasis in Failing Atrial Myocytes. Biophysical Journal, 2020, 118, 476-491.	0.2	16
65	Cardiac Transverse Tubules in Physiology and Heart Failure. Annual Review of Physiology, 2022, 84, 229-255.	5.6	15
66	A computational pipeline for quantification of mouse myocardial stiffness parameters. Computers in Biology and Medicine, 2014, 53, 65-75.	3.9	13
67	Secretoneurin Is an Endogenous Calcium/Calmodulin-Dependent Protein Kinase II Inhibitor That Attenuates Ca ²⁺ -Dependent Arrhythmia. Circulation: Arrhythmia and Electrophysiology, 2019, 12, e007045.	2.1	12
68	Phospholamban ablation in hearts expressing the high affinity SERCA2b isoform normalizes global Ca²⁺ homeostasis but not Ca²⁺-dependent hypertrophic signaling. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H2574-H2582.	1.5	11
69	Cardiomyocyte Ca²⁺ dynamics: clinical perspectives. Scandinavian Cardiovascular Journal, 2016, 50, 65-77.	0.4	11
70	Compensatory and decompensatory alterations in cardiomyocyte Ca²⁺ dynamics in hearts with diastolic dysfunction following aortic banding. Journal of Physiology, 2017, 595, 3867-3889.	1.3	11
71	Studying dyadic structureâ€"function relationships: a review of current modeling approaches and new insights into Ca²⁺ (mis)handling. Clinical Medicine Insights: Cardiology, 2017, 11, 117954681769860.	0.6	11
72	Cardioprotective Effects of the Novel Compound Vastiras in a Preclinical Model of End-Organ Damage. Hypertension, 2020, 75, 1195-1204.	1.3	11

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73	Integrating multi-scale data to create a virtual physiological mouse heart. Interface Focus, 2013, 3, 20120076.	1.5	10
74	Evidence for heterogeneous subsarcolemmal Na+ levels in rat ventricular myocytes. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 316, H941-H957.	1.5	10
75	I CaL inhibition prevents arrhythmogenic Ca2+ waves caused by abnormal Ca2+ sensitivity of RyR or SR Ca2+ accumulation. Cardiovascular Research, 2013, 98, 315-325.	1.8	9
76	CaMKII inhibition has dual effects on spontaneous Ca²⁺ release and Ca²⁺ alternans in ventricular cardiomyocytes from mice with a gain-of-function RyR2 mutation. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 321, H446-H460.	1.5	9
77	Synchrony of sarcomeric movement regulates left ventricular pump function in the in vivo beating mouse heart. Journal of General Physiology, 2021, 153, .	0.9	9
78	Nanoscale organization of ryanodine receptor distribution and phosphorylation pattern determines the dynamics of calcium sparks. PLoS Computational Biology, 2022, 18, e1010126.	1.5	8
79	Gene Transfer in Isolated Adult Cardiomyocytes. Methods in Molecular Biology, 2017, 1521, 169-182.	0.4	7
80	Probenecid Improves Cardiac Function in Subjects with a Fontan Circulation and Augments Cardiomyocyte Calcium Homeostasis. Pediatric Cardiology, 2020, 41, 1675-1688.	0.6	7
81	Blocking phospholamban with VHH intrabodies enhances contractility and relaxation in heart failure. Nature Communications, 2022, 13, .	5.8	7
82	Potassium infusion increases the likelihood of conversion of recent-onset atrial fibrillationâ€”A single-blinded, randomized clinical trial. American Heart Journal, 2020, 221, 114-124.	1.2	6
83	Role of t-tubule remodeling on mechanisms of abnormal calcium release during heart failure development in canine ventricle. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 320, H1658-H1669.	1.5	6
84	Phosphatidylinositol-4,5-Bisphosphate Binding to Amphiphysin-II Modulates T-Tubule Remodeling: Implications for Heart Failure. Frontiers in Physiology, 2021, 12, 782767.	1.3	6
85	Energy-efficiency of Cardiomyocyte Stimulation with Rectangular Pulses. Scientific Reports, 2019, 9, 13307.	1.6	5
86	Chronic cardiac structural damage, diastolic and systolic dysfunction following acute myocardial injury due to bromine exposure in rats. Archives of Toxicology, 2021, 95, 179-193.	1.9	5
87	T-tubular collagen: a new player in mechanosensing and disease?. Cardiovascular Research, 2017, 113, 839-840.	1.8	4
88	Real-Time In Vivo Imaging of Mouse Left Ventricle Reveals Fluctuating Movements of the Intercalated Discs. Nanomaterials, 2020, 10, 532.	1.9	4
89	Linking ryanodine receptor Ca²⁺leak and Na⁺current in heart: a day in the life of flecainide. Acta Physiologica, 2015, 214, 300-302.	1.8	3
90	A Matched-Filter-Based Algorithm for Subcellular Classification of T-System in Cardiac Tissues. Biophysical Journal, 2019, 116, 1386-1393.	0.2	3

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91	Exercise Training Stabilizes RyR2-Dependent Ca2+ Release in Post-infarction Heart Failure. Frontiers in Cardiovascular Medicine, 2020, 7, 623922.	1.1	3
92	Sarcoplasmic Reticulum Calcium Release Is Required for Arrhythmogenesis in the Mouse. Frontiers in Physiology, 2021, 12, 744730.	1.3	3
93	Mind the store: modulating Ca2+ reuptake with a leaky sarcoplasmic reticulum. Cardiovascular Research, 2013, 98, 165-168.	1.8	2
94	Discordant Ca2+ release in cardiac myocytes: characterization and susceptibility to pharmacological RyR2 modulation. Pflugers Archiv European Journal of Physiology, 2022, 474, 625-636.	1.3	2
95	Strange bedfellows: biologists and mathematical modelers tie the knot on cardiomyocyte calcium homeostasis. Drug Discovery Today: Disease Models, 2014, 14, 11-16.	1.2	1
96	Calciumâ€activated potassium current: parallels in cardiac development and disease. Acta Physiologica, 2016, 216, 7-9.	1.8	1
97	Channel surfing: new insights into plasticity of excitationâ€contraction coupling. Journal of Physiology, 2019, 597, 2119-2120.	1.3	1
98	A horse of a different colour: distinct mechanisms of HFpEF and HFrEF. Journal of Physiology, 2020, 598, 5005-5006.	1.3	1
99	An mRNA assay system demonstrates proteasomal-specific degradation contributes to cardiomyopathic phospholamban null mutation. Molecular Medicine, 2021, 27, 102.	1.9	1
100	A TRP to the emergency room: Understanding arrhythmia in the ageing heart. Cardiovascular Research, 2022, 118, 932-933.	1.8	1
101	Image-Driven Modeling of Nanoscopic Cardiac Function: Where Have We Come From, and Where Are We Going?. Frontiers in Physiology, 2022, 13, 834211.	1.3	1
102	Meeting Preview: Europhysiology 2022 Letâ€™s meet for real. , 2022, , 38.		1
103	Commentaries on Viewpoint: The cardiac contraction cycle: Is Ca2+ going local?. Journal of Applied Physiology, 2009, 107, 1985-1987.	1.2	0
104	Highâ€Speed Recording of Cardiomyocyte Calcium and Contraction. Optik & Photonik, 2016, 11, 28-30.	0.3	0
105	Bringing European physiologists together. Acta Physiologica, 2018, 222, e13043.	1.8	0
106	Reply from M. Frisk, D. B. Lipsett and W. E. Louch. Journal of Physiology, 2019, 597, 2967-2968.	1.3	0
107	Syndecanâ€4 promotes myocardial stiffness by regulating collagen expression and crossâ€linking in response to pressure overload (1152.2). FASEB Journal, 2014, 28, 1152.2.	0.2	0
108	Europhysiology 2022: Letâ€™s meet for real. Acta Physiologica, 2022, 235, e13825.	1.8	0