Peter J Mohler

List of Publications by Year
in descending order

121 papers	5,181 citations	101543 36 h-index	98798 67 g-index
123 all docs	123 docs citations	123 times ranked	6958 citing authors

#	Article	IF	Citations
1	A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation. Cell, 2008, 133, 462-474.	28.9	951
2	Atrial fibrillation driven by micro-anatomic intramural re-entry revealed by simultaneous sub-epicardial and sub-endocardial optical mapping in explanted human hearts. European Heart Journal, 2015, 36, 2390-2401.	2.2	347
3	In Vivo Genome Editing Restores Dystrophin Expression and Cardiac Function in Dystrophic Mice. Circulation Research, 2017, 121, 923-929.	4.5	123
4	Threeâ€dimensional Integrated Functional, Structural, and Computational Mapping to Define the Structural â€œFingerprintsâ€•of Heartâ€Specific Atrial Fibrillation Drivers in Human Heart Ex Vivo. Journal of the American Heart Association, 2017, 6, .	3.7	120
5	Ca _{<i>V</i>} 1.2 Î²-subunit coordinates CaMKII-triggered cardiomyocyte death and afterdepolarizations. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4996-5000.	7.1	114
6	Ankyrin-G Coordinates Intercalated Disc Signaling Platform to Regulate Cardiac Excitability In Vivo. Circulation Research, 2014, 115, 929-938.	4.5	114
7	Neutralization of SARS-CoV-2 Omicron sub-lineages BA.1, BA.1.1, and BA.2. Cell Host and Microbe, 2022, 30, 1093-1102.e3.	11.0	114
8	Calsequestrin 2 deletion causes sinoatrial node dysfunction and atrial arrhythmias associated with altered sarcoplasmic reticulum calcium cycling and degenerative fibrosis within the mouse atrial pacemaker complex1. European Heart Journal, 2015, 36, 686-697.	2.2	110
9	MG53-mediated cell membrane repair protects against acute kidney injury. Science Translational Medicine, 2015, 7, 279ra36.	12.4	103
10	Voltage-Gated Sodium Channel Phosphorylation at Ser571 Regulates Late Current, Arrhythmia, and Cardiac Function In Vivo. Circulation, 2015, 132, 567-577.	1.6	99
11	Assembly of the Cardiac Intercalated Disk during Pre- and Postnatal Development of the Human Heart. PLoS ONE, 2014, 9, e94722.	2.5	98
12	Cardiovascular risk of electronic cigarettes: a review of preclinical and clinical studies. Cardiovascular Research, 2020, 116, 40-50.	3.8	95
13	Role of late sodium current as a potential arrhythmogenic mechanism in the progression of pressure-induced heart disease. Journal of Molecular and Cellular Cardiology, 2013, 61, 111-122.	1.9	89
14	Adenosine-Induced Atrial Fibrillation. Circulation, 2016, 134, 486-498.	1.6	85
15	Glial ankyrins facilitate paranodal axoglial junction assembly. Nature Neuroscience, 2014, 17, 1673-1681.	14.8	82
16	Human sinoatrial node structure: 3D microanatomy of sinoatrial conduction pathways. Progress in Biophysics and Molecular Biology, 2016, 120, 164-178.	2.9	81
17	Ankyrin-G Directly Binds to Kinesin-1 to Transport Voltage-Gated Na+ Channels into Axons. Developmental Cell, 2014, 28, 117-131.	7.0	80
18	Redundant and diverse intranodal pacemakers and conduction pathways protect the human sinoatrial node from failure. Science Translational Medicine, 2017, 9, .	12.4	76

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19	Molecular Mapping of Sinoatrial Node HCN Channel Expression in the Human Heart. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 1219-1227.	4.8	72
20	Upregulation of Adenosine A1 Receptors Facilitates Sinoatrial Node Dysfunction in Chronic Canine Heart Failure by Exacerbating Nodal Conduction Abnormalities Revealed by Novel Dual-Sided Intramural Optical Mapping. Circulation, 2014, 130, 315-324.	1.6	70
21	Roles and regulation of protein phosphatase 2A (PP2A) in the heart. Journal of Molecular and Cellular Cardiology, 2016, 101, 127-133.	1.9	69
22	Nitric Oxide-Dependent Activation of CaMKII Increases Diastolic Sarcoplasmic Reticulum Calcium Release in Cardiac Myocytes in Response to Adrenergic Stimulation. PLoS ONE, 2014, 9, e87495.	2.5	63
23	Exercise training-induced bradycardia: evidence for enhanced parasympathetic regulation without changes in intrinsic sinoatrial node function. Journal of Applied Physiology, 2015, 118, 1344-1355.	2.5	62
24	Calcium-Activated Potassium Current Modulates Ventricular Repolarization in Chronic Heart Failure. PLoS ONE, 2014, 9, e108824.	2.5	62
25	Dysfunction in the Î²II Spectrinâ€"Dependent Cytoskeleton Underlies Human Arrhythmia. Circulation, 2015, 131, 695-708.	1.6	56
26	Twoâ€Pore K + Channel TREKâ€1 Regulates Sinoatrial Node Membrane Excitability. Journal of the American Heart Association, 2016, 5, e002865.	3.7	52
27	Integration of High-Resolution Optical Mapping and 3-Dimensional Micro-Computed Tomographic Imaging to Resolve the Structural Basis of Atrial Conduction in the Human Heart. Circulation: Arrhythmia and Electrophysiology, 2015, 8, 1514-1517.	4.8	51
28	<i>SCN5A</i> variant that blocks fibroblast growth factor homologous factor regulation causes human arrhythmia. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12528-12533.	7.1	51
29	Human Atrial Fibrillation Drivers ResolvedÂWith Integrated Functional andÂStructural Imaging to Benefit ClinicalÂMapping. JACC: Clinical Electrophysiology, 2018, 4, 1501-1515.	3.2	51
30	Oxidative stress creates a unique, CaMKII-mediated substrate for atrial fibrillation in heart failure. JCI Insight, 2018, 3, .	5.0	50
31	Role of CaMKII in cardiac arrhythmias. Trends in Cardiovascular Medicine, 2015, 25, 392-397.	4.9	49
32	Tubulin polymerization disrupts cardiac Î²-adrenergic regulation of late INa. Cardiovascular Research, 2014, 103, 168-177.	3.8	45
33	Protein phosphatase 2A regulatory subunit B56Î± limits phosphatase activity in the heart. Science Signaling, 2015, 8, ra72.	3.6	45
34	Role of Oxidative Stress in Thyroid Hormone-Induced Cardiomyocyte Hypertrophy and Associated Cardiac Dysfunction: An Undisclosed Story. Oxidative Medicine and Cellular Longevity, 2015, 2015, 1-16.	4.0	44
35	Ankyrin-B dysfunction predisposes to arrhythmogenic cardiomyopathy and is amenable to therapy. Journal of Clinical Investigation, 2019, 129, 3171-3184.	8.2	42
36	Ankyrins and Spectrins in Cardiovascular Biology and Disease. Frontiers in Physiology, 2017, 8, 852.	2.8	40

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37	Impaired neuronal sodium channels cause intranodal conduction failure and reentrant arrhythmias in human sinoatrial node. Nature Communications, 2020, 11, 512.	12.8	39
38	Neuronal Na+ channel blockade suppresses arrhythmogenic diastolic Ca2+ release. Cardiovascular Research, 2015, 106, 143-152.	3.8	38
39	Plakophilin-2 Haploinsufficiency Causes Calcium Handling Deficits and Modulates the Cardiac Response Towards Stress. International Journal of Molecular Sciences, 2019, 20, 4076.	4.1	36
40	Î²IV-Spectrin regulates STAT3 targeting to tune cardiac response to pressure overload. Journal of Clinical Investigation, 2018, 128, 5561-5572.	8.2	36
41	Novel application of 3D contrast-enhanced CMR to define fibrotic structure of the human sinoatrial node in vivo. European Heart Journal Cardiovascular Imaging, 2017, 18, 862-869.	1.2	35
42	Whole Exome Sequencing in Atrial Fibrillation. PLoS Genetics, 2016, 12, e1006284.	3.5	35
43	Protein Phosphatase 2A Regulates Cardiac Na ⁺ Channels. Circulation Research, 2019, 124, 737-746.	4.5	34
44	Calmodulin kinase II regulates atrial myocyte late sodium current, calcium handling, and atrial arrhythmia. Heart Rhythm, 2020, 17, 503-511.	0.7	34
45	The evolving role of ankyrin-B in cardiovascular disease. Heart Rhythm, 2017, 14, 1884-1889.	0.7	33
46	MicroRNA Biophysically Modulates Cardiac Action Potential by Direct Binding to Ion Channel. Circulation, 2021, 143, 1597-1613.	1.6	33
47	EHD3-Dependent Endosome Pathway Regulates Cardiac Membrane Excitability and Physiology. Circulation Research, 2014, 115, 68-78.	4.5	32
48	The Frank-Starling mechanism involves deceleration of cross-bridge kinetics and is preserved in failing human right ventricular myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H2077-H2086.	3.2	32
49	Neuronal Na+ Channels Are Integral Components of Pro-Arrhythmic Na+/Ca2+ Signaling Nanodomain That Promotes Cardiac Arrhythmias During Î²-Adrenergic Stimulation. JACC Basic To Translational Science, 2016, 1, 251-266.	4.1	31
50	Cardiac Electrical and Structural Changes During Bacterial Infection: An Instructive Model to Study Cardiac Dysfunction in Sepsis. Journal of the American Heart Association, 2016, 5, .	3.7	31
51	Aberrant Expression of a Non-muscle RBFOX2 Isoform Triggers Cardiac Conduction Defects in Myotonic Dystrophy. Developmental Cell, 2020, 52, 748-763.e6.	7.0	31
52	Elevated local [Ca²⁺] and CaMKII promote spontaneous Ca²⁺release in ankyrin-B-deficient hearts. Cardiovascular Research, 2016, 111, 287-294.	3.8	30
53	Silencing miR-370-3p rescues funny current and sinus node function in heart failure. Scientific Reports, 2020, 10, 11279.	3.3	30
54	CaMKII-dependent late Na⁺current increases electrical dispersion and arrhythmia in ischemia-reperfusion. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 315, H794-H801.	3.2	29

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55	Etiology-dependent impairment of relaxation kinetics in right ventricular end-stage failing human myocardium. Journal of Molecular and Cellular Cardiology, 2018, 121, 81-93.	1.9	28
56	Heart failure duration progressively modulates the arrhythmia substrate through structural and electrical remodeling. Life Sciences, 2015, 123, 61-71.	4.3	24
57	The role of Î²II spectrin in cardiac health and disease. Life Sciences, 2018, 192, 278-285.	4.3	24
58	Dysfunction of the Î²₂-spectrin-based pathway in human heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 310, H1583-H1591.	3.2	23
59	Defining the molecular signatures of human right heart failure. Life Sciences, 2018, 196, 118-126.	4.3	23
60	Fibroblast growth factor-inducible 14 mediates macrophage infiltration in heart to promote pressure overload-induced cardiac dysfunction. Life Sciences, 2020, 247, 117440.	4.3	23
61	Fibroblast-Specific Proteotranscriptomes Reveal Distinct Fibrotic Signatures of Human Sinoatrial Node in Nonfailing and Failing Hearts. Circulation, 2021, 144, 126-143.	1.6	22
62	Differential involvement of various sources of reactive oxygen species in thyroxin-induced hemodynamic changes and contractile dysfunction of the heart and diaphragm muscles. Free Radical Biology and Medicine, 2015, 83, 252-261.	2.9	21
63	Optical Mapping-Validated Machine Learning Improves Atrial Fibrillation Driver Detection by Multi-Electrode Mapping. Circulation: Arrhythmia and Electrophysiology, 2020, 13, e008249.	4.8	21
64	Nodal Î² spectrins are required to maintain Na+ channel clustering and axon integrity. ELife, 2020, 9, .	6.0	20
65	Mechanisms and Alterations of Cardiac Ion Channels Leading to Disease: Role of Ankyrin-B in Cardiac Function. Biomolecules, 2020, 10, 211.	4.0	19
66	Î²IV-Spectrin/STAT3 complex regulates fibroblast phenotype, fibrosis, and cardiac function. JCI Insight, 2019, 4, .	5.0	19
67	Unmasking Arrhythmogenic Hubs of Reentry Driving Persistent Atrial Fibrillation for Patientâ€Specific Treatment. Journal of the American Heart Association, 2020, 9, e017789.	3.7	18
68	microRNA overexpression in slow transit constipation leads to reduced Na_V1.5 current and altered smooth muscle contractility. Gut, 2020, 69, 868-876.	12.1	18
69	Claudin-5 levels are reduced from multiple cell types in human failing hearts and are associated with mislocalization of ephrin-B1. Cardiovascular Pathology, 2015, 24, 160-167.	1.6	17
70	Arrhythmogenic Substrates for Atrial Fibrillation in Obesity. Frontiers in Physiology, 2018, 9, 1482.	2.8	17
71	Î² spectrin-dependent and domain specific mechanisms for Na+ channel clustering. ELife, 2020, 9, .	6.0	17
72	Use of Whole Exome Sequencing for the Identification of <i>I</i> _{to} â€Based Arrhythmia Mechanism and Therapy. Journal of the American Heart Association, 2015, 4, .	3.7	16

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73	Quantifying Drug-Induced Nanomechanics and Mechanical Effects to Single Cardiomyocytes for Optimal Drug Administration To Minimize Cardiotoxicity. Langmuir, 2016, 32, 1909-1919.	3.5	16
74	Effects of zacopride, a moderate IK1 channel agonist, on triggered arrhythmia and contractility in human ventricular myocardium. Pharmacological Research, 2017, 115, 309-318.	7.1	16
75	Ankyrin-B Q1283H Variant Linked to Arrhythmias Via Loss of Local Protein Phosphatase 2A Activity Causes Ryanodine Receptor Hyperphosphorylation. Circulation, 2018, 138, 2682-2697.	1.6	16
76	Microfibrillar-Associated Protein 4 Regulates Stress-Induced Cardiac Remodeling. Circulation Research, 2021, 128, 723-737.	4.5	16
77	Eps15 Homology Domain-containing Protein 3 Regulates Cardiac T-type Ca2+ Channel Targeting and Function in the Atria. Journal of Biological Chemistry, 2015, 290, 12210-12221.	3.4	14
78	Chronic heart failure increases negative chronotropic effects of adenosine in canine sinoatrial cells via A1R stimulation and GIRK-mediated IKado. Life Sciences, 2020, 240, 117068.	4.3	14
79	Impact of etiology on force and kinetics of left ventricular end-stage failing human myocardium. Journal of Molecular and Cellular Cardiology, 2021, 156, 7-19.	1.9	14
80	Identification of General and Heart-Specific miRNAs in Sheep (Ovis aries). PLoS ONE, 2015, 10, e0143313.	2.5	13
81	Novel Mechanistic Roles for Ankyrin-G in Cardiac Remodeling and Heart Failure. JACC Basic To Translational Science, 2018, 3, 675-689.	4.1	13
82	Abnormal myocardial expression of SAP97 is associated with arrhythmogenic risk. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 318, H1357-H1370.	3.2	13
83	Inherited Variants in <i>SCARB1</i> Cause Severe Early-Onset Coronary Artery Disease. Circulation Research, 2021, 129, 296-307.	4.5	12
84	Altered microRNA and mRNA profiles during heart failure in the human sinoatrial node. Scientific Reports, 2021, 11, 19328.	3.3	12
85	First In Vivo Use of High-Resolution Near-Infrared Optical Mapping to Assess Atrial Activation During Sinus Rhythm and Atrial Fibrillation in a Large Animal Model. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e006870.	4.8	11
86	Loss of CASK Accelerates Heart Failure Development. Circulation Research, 2021, 128, 1139-1155.	4.5	11
87	Î²IV-spectrin as a stalk cell-intrinsic regulator of VEGF signaling. Nature Communications, 2022, 13, 1326.	12.8	11
88	Defective interactions of protein partner with ion channels and transporters as alternative mechanisms of membrane channelopathies. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 723-730.	2.6	10
89	Insights into length-dependent regulation of cardiac cross-bridge cycling kinetics in human myocardium. Archives of Biochemistry and Biophysics, 2016, 601, 48-55.	3.0	10
90	Altered regulation of cardiac ankyrin repeat protein in heart failure. Heliyon, 2018, 4, e00514.	3.2	10

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91	Rhythm dynamics of the aging heart: an experimental study using conscious, restrained mice. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 319, H893-H905.	3.2	10
92	Joiner et al. reply. Nature, 2014, 513, E3-E3.	27.8	9
93	Endosome-based protein trafficking and Ca2+ homeostasis in the heart. Frontiers in Physiology, 2015, 6, 34.	2.8	9
94	Common human ANK2 variant confers in vivo arrhythmia phenotypes. Heart Rhythm, 2016, 13, 1932-1940.	0.7	9
95	Assessment of PKA and PKC inhibitors on force and kinetics of non-failing and failing human myocardium. Life Sciences, 2018, 215, 119-127.	4.3	9
96	Genetic and non-genetic risk factors associated with atrial fibrillation. Life Sciences, 2022, 299, 120529.	4.3	9
97	Microtubular remodeling and decreased expression of Nav1.5 with enhanced EHD4 in cells from the infarcted heart. Life Sciences, 2018, 201, 72-80.	4.3	8
98	New mechanistic insights to PLOD1-mediated human vascular disease. Translational Research, 2022, 239, 1-17.	5.0	8
99	Defining the Links Between Oxidative Stressâ€“Based Biomarkers andÂPostoperative Atrial Fibrillation. Journal of the American Heart Association, 2015, 4, .	3.7	7
100	Ca2+/calmodulin kinase IIâ€“dependent regulation of Î²IV-spectrin modulates cardiac fibroblast gene expression, proliferation, and contractility. Journal of Biological Chemistry, 2021, 297, 100893.	3.4	7
101	A Module of Human Peripheral Blood Mononuclear Cell Transcriptional Network Containing Primitive and Differentiation Markers Is Related to Specific Cardiovascular Health Variables. PLoS ONE, 2014, 9, e95124.	2.5	5
102	The Effect of Sorafenib, Tadalafil and Macitentan Treatments on Thyroxin-Induced Hemodynamic Changes and Cardiac Abnormalities. PLoS ONE, 2016, 11, e0153694.	2.5	5
103	Giant ankyrin-G regulates cardiac function. Journal of Biological Chemistry, 2021, 296, 100507.	3.4	4
104	Viral transport media for COVID-19 testing. MethodsX, 2021, 8, 101433.	1.6	4
105	SAP97 and Cortactin Remodeling in Arrhythmogenic Purkinje Cells. PLoS ONE, 2014, 9, e106830.	2.5	4
106	Complexity of cardiac ion channel macromolecular complexes. Cardiovascular Research, 2016, 110, 163-164.	3.8	3
107	Increased cross-bridge recruitment contributes to transient increase in force generation beyond maximal capacity in human myocardium. Journal of Molecular and Cellular Cardiology, 2018, 114, 116-123.	1.9	3
108	Altered Expression of Zonula occludens-1 Affects Cardiac Na+ Channels and Increases Susceptibility to Ventricular Arrhythmias. Cells, 2022, 11, 665.	4.1	3

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109	Treat the Patient, Not Just the Cell!. Circulation Research, 2017, 120, 1390-1392.	4.5	2
110	Advancements in the use of gene therapy for cardiac arrhythmia. Heart Rhythm, 2017, 14, 1061-1062.	0.7	2
111	Novel Pathways for Regulation of Sinoatrial Node Plasticity and Heart Rate. Circulation Research, 2017, 121, 1027-1028.	4.5	2
112	The Davis Heart and Lung Research Institute. Circulation Research, 2017, 120, 1068-1071.	4.5	1
113	Potential use of ivabradine for treatment of atrial fibrillation. Journal of Cardiovascular Electrophysiology, 2019, 30, 253-254.	1.7	1
114	Stretching single titin molecules from failing human hearts reveals titinâ€™s role in blunting cardiac kinetic reserve. Cardiovascular Research, 2020, 116, 127-137.	3.8	1
115	Strategies for Risk Analysis and Disease Classification in Atrial Fibrillation. Journal of Cardiovascular Electrophysiology, 2016, 27, 1271-1273.	1.7	0
116	Response by El Refaey et al to Letter Regarding Article, â€œProtein Phosphatase 2A Regulates Cardiac Na ⁺ Channelsâ€. Circulation Research, 2019, 124, e60-e61.	4.5	0
117	Abstract 18171: HCN Channel Distribution in the Human Sinoatrial Node and Latent Atrial Pacemakers <i>(Best of Basic Science Abstract)</i>. Circulation, 2015, 132, .	1.6	0
118	Antiarrhythmic Activity of NMDA Receptor Antagonists in Humans Versus Animal Models. FASEB Journal, 2018, 32, 901.16.	0.5	0
119	Forceâ€frequency Relationship and Early Relaxation Kinetics Are Preserved Upon SR Blockade in Human Myocardium. FASEB Journal, 2018, 32, 903.15.	0.5	0
120	Stretching Single Titin Molecules from Failing Human Hearts at Cardiac Cycle Reveals Titin's Role in Cardiac Kinetic Reserve. FASEB Journal, 2018, 32, 903.6.	0.5	0
121	Abstract 15963: Microrna Biophysically Modulates Cardiac Physiology via Directly Binding to Ion Channel. Circulation, 2020, 142, .	1.6	0