Alvin Shrier

List of Publications by Year
in descending order

71 papers	2,973 citations	159585 30 h-index	168389 53 g-index
78 all docs	78 docs citations	78 times ranked	3214 citing authors

#	Article	IF	Citations
1	Effects of Experimental Heart Failure on Atrial Cellular and Ionic Electrophysiology. Circulation, 2000, 101, 2631-2638.	1.6	356
2	Expression of Distinct ERG Proteins in Rat, Mouse, and Human Heart. Journal of Biological Chemistry, 2000, 275, 5997-6006.	3.4	152
3	Global bifurcations of a periodically forced biological oscillator. Physical Review A, 1984, 29, 1348-1357.	2.5	149
4	N-linked glycosylation sites determine HERG channel surface membrane expression. Journal of Physiology, 1999, 515, 41-48.	2.9	131
5	Development, calibration, and validation of a novel human ventricular myocyte model in health, disease, and drug block. ELife, 2019, 8, .	6.0	131
6	Chaos in neurobiology. IEEE Transactions on Systems, Man, and Cybernetics, 1983, SMC-13, 790-798.	0.9	128
7	Localization and Enhanced Current Density of the Kv4.2 Potassium Channel by Interaction with the Actin-Binding Protein Filamin. Journal of Neuroscience, 2000, 20, 8736-8744.	3.6	126
8	Bifurcation and chaos in a periodically stimulated cardiac oscillator. Physica D: Nonlinear Phenomena, 1983, 7, 89-101.	2.8	124
9	Subthreshold Dynamics in Periodically Stimulated Squid Giant Axons. Physical Review Letters, 1996, 76, 4074-4077.	7.8	120
10	Heterogeneity of Sodium Current in Atrial vs Epicardial Ventricular Myocytes of Adult Guinea Pig Hearts. Journal of Molecular and Cellular Cardiology, 2002, 34, 1185-1194.	1.9	84
11	Co-chaperone FKBP38 Promotes HERG Trafficking. Journal of Biological Chemistry, 2007, 282, 23509-23516.	3.4	79
12	Hsp40 Chaperones Promote Degradation of the hERG Potassium Channel. Journal of Biological Chemistry, 2010, 285, 3319-3329.	3.4	72
13	Characterization of Potassium-Dependent Currents in Protoplasts of Corn Suspension Cells. Plant Physiology, 1989, 89, 1184-1192.	4.8	67
14	Identification of the cyclic-nucleotide-binding domain as a conserved determinant of ion-channel cell-surface localization. Journal of Cell Science, 2005, 118, 2803-2812.	2.0	60
15	Aldosterone, SGK1, and ion channels in the kidney. Clinical Science, 2018, 132, 173-183.	4.3	60
16	Paroxysmal Starting and Stopping of Circulating Waves in Excitable Media. Physical Review Letters, 2000, 84, 4248-4251.	7.8	56
17	Subcellular localization of the Na⁺/H⁺exchanger NHE1 in rat myocardium. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 276, H709-H717.	3.2	55
18	High-throughput phenotyping of heteromeric human ether-Ã-go-go-related gene potassium channel variants can discriminate pathogenic from rare benign variants. Heart Rhythm, 2020, 17, 492-500.	0.7	54

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19	Identification of a COOH-terminal Segment Involved in Maturation and Stability of Human Ether-a-go-go-related Gene Potassium Channels. Journal of Biological Chemistry, 2003, 278, 40105-40112.	3.4	52
20	Predicting the onset of period-doubling bifurcations in noisy cardiac systems. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9358-9363.	7.1	50
21	Universal Bifurcations and the Classification of Cardiac Arrhythmias. Annals of the New York Academy of Sciences, 1987, 504, 168-178.	3.8	49
22	Calcineurin B Homologous Protein 3 Promotes the Biosynthetic Maturation, Cell Surface Stability, and Optimal Transport of the Na+/H+ Exchanger NHE1 Isoform. Journal of Biological Chemistry, 2008, 283, 12456-12467.	3.4	47
23	Series Resistance Compensation for Whole-Cell Patch-Clamp Studies Using a Membrane State Estimator. Biophysical Journal, 1999, 77, 2590-2601.	0.5	42
24	The DNAJA2 Substrate Release Mechanism Is Essential for Chaperone-mediated Folding. Journal of Biological Chemistry, 2012, 287, 41939-41954.	3.4	42
25	Inhibition of PRL-2Â·CNNM3 Protein Complex Formation Decreases Breast Cancer Proliferation and Tumor Growth. Journal of Biological Chemistry, 2016, 291, 10716-10725.	3.4	39
26	Transient Receptor Potential Melastatin 7 Cation Channel Kinase. Hypertension, 2016, 67, 763-773.	2.7	39
27	Ubiquitination-dependent quality control of hERG K⁺ channel with acquired and inherited conformational defect at the plasma membrane. Molecular Biology of the Cell, 2013, 24, 3787-3804.	2.1	38
28	Spontaneous Initiation and Termination of Complex Rhythms in Cardiac Cell Culture. Journal of Cardiovascular Electrophysiology, 2003, 14, S229-S236.	1.7	37
29	hERG quality control and the long QT syndrome. Journal of Physiology, 2016, 594, 2469-2481.	2.9	37
30	Aldosterone signaling through transient receptor potential melastatin 7 cation channel (TRPM7) and its Î±-kinase domain. Cellular Signalling, 2013, 25, 2163-2175.	3.6	32
31	Reentrant waves in a ring of embryonic chick ventricular cells imaged with a Ca2+ sensitive dye. BioSystems, 2003, 71, 71-80.	2.0	24
32	Spatial distribution of nerve processes and beta-adrenoreceptors in the rat atrioventricular node. Journal of Anatomy, 1998, 192, 517-528.	1.5	23
33	Effects of Divalent Cations on the E-4031-Sensitive Repolarization Current, IKr, in Rabbit Ventricular Myocytes. Biophysical Journal, 1998, 74, 1278-1285.	0.5	23
34	Mutation-specific peripheral and ER quality control of hERG channel cell-surface expression. Scientific Reports, 2019, 9, 6066.	3.3	22
35	Pacemaker currents in chick embryonic heart cells change with development. Nature, 1980, 283, 670-671.	27.8	21
36	Comparison of the pacemaker properties of chick embryonic atrial and ventricular heart cells. Journal of Membrane Biology, 1982, 69, 49-56.	2.1	21

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37	Spatial Symmetry Breaking Determines Spiral Wave Chirality. Physical Review Letters, 2014, 113, 158101.	7.8	21
38	Relationship Between Different Recovery Curves Representing Rate-Dependent AV Nodal Function in Rabbit Heart. Journal of Cardiovascular Electrophysiology, 1994, 5, 63-75.	1.7	20
39	Ionic mechanisms and nonlinear dynamics of embryonic chick heart cell aggregates. Progress in Biophysics and Molecular Biology, 1994, 61, 255-281.	2.9	20
40	C-terminal Domain of Kv4.2 and Associated KChIP2 Interactions Regulate Functional Expression and Gating of Kv4.2. Journal of Biological Chemistry, 2006, 281, 27134-27144.	3.4	20
41	N-Myristoylation and Ca2+ Binding of Calcineurin B Homologous Protein CHP3 Are Required to Enhance Na+/H+ Exchanger NHE1 Half-life and Activity at the Plasma Membrane. Journal of Biological Chemistry, 2012, 287, 36883-36895.	3.4	20
42	Bag1 Co-chaperone Promotes TRC8 E3 Ligase-dependent Degradation of Misfolded Human Ether a Go-Go-related Gene (hERG) Potassium Channels. Journal of Biological Chemistry, 2017, 292, 2287-2300.	3.4	20
43	Hsp70 and DNAJA2 limit CFTR levels through degradation. PLoS ONE, 2019, 14, e0220984.	2.5	19
44	On the Role of Subthreshold Dynamics in Neuronal Signaling. Journal of Theoretical Biology, 1999, 197, 207-216.	1.7	18
45	Aldosterone Upregulates Transient Receptor Potential Melastatin 7 (TRPM7). Journal of Biological Chemistry, 2016, 291, 20163-20172.	3.4	17
46	Aldosterone and Ion Channels. Vitamins and Hormones, 2019, 109, 105-131.	1.7	15
47	Resetting and Annihilating Reentrant Waves in a Ring of Cardiac Tissue: Theory and Experiment. Progress of Theoretical Physics Supplement, 2000, 139, 83-89.	0.1	14
48	Characterization of constitutive and acid-induced outwardly rectifying chloride currents in immortalized mouse distal tubular cells. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 2007-2019.	2.4	14
49	A comparative study of collagenase- and trypsin-dissociated embryonic heart cells: reaggregation, electrophysiology, and pharmacology. Canadian Journal of Physiology and Pharmacology, 1983, 61, 408-419.	1.4	12
50	Rhythms Produced by High-Amplitude Periodic Stimulation of Spontaneously Beating Aggregates of Embryonic Chick Ventricular Myocytes. Annals of the New York Academy of Sciences, 1990, 591, 11-22.	3.8	12
51	New Methods for the Analysis of Heartbeat Behavior in Risk Stratification. Frontiers in Physiology, 2011, 2, 88.	2.8	10
52	The Topology of Phase Response Curves Induced by Single and Paired Stimuli in Spontaneously Oscillating Chick Heart Cell Aggregates. Journal of Biological Rhythms, 1992, 7, 89-104.	2.6	9
53	A review of the effects of three cardioactive agents on the electrical activity from embryonic chick heart cell aggregates: TTX, ACh, and E-4031. Progress in Biophysics and Molecular Biology, 1994, 62, 185-202.	2.9	9
54	Action Potentials Occur Spontaneously in Squid Giant Axons with Moderately Alkaline Intracellular pH. Biological Bulletin, 2001, 201, 186-192.	1.8	9

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55	Demonstration of cardiac rotor and source mapping techniques in embryonic chick monolayers. Chaos, 2017, 27, 093938.	2.5	9
56	Varieties of reentrant dynamics. Chaos, 2017, 27, 041101.	2.5	8
57	Effects of D-600 on sodium current in squid axons. Journal of Membrane Biology, 1984, 79, 211-214.	2.1	6
58	Complex Rhythms Resulting From Overdrive Suppression in Electrically Stimulated Heart Cell Aggregates. PACE - Pacing and Clinical Electrophysiology, 1990, 13, 1678-1685.	1.2	5
59	Voltage-dependent inactivation of the potassium current of embryonic chick hepatocytes. Canadian Journal of Physiology and Pharmacology, 1991, 69, 739-745.	1.4	5
60	Functional Characterization of Oscillatory and Excitable Media. Bulletin of Mathematical Biology, 2015, 77, 782-795.	1.9	4
61	Defining the pattern of initiation of monomorphic ventricular tachycardia using the beat-to-beat intervals recorded on implantable cardioverter defibrillators from the RAFT study: A computer-based algorithm. Journal of Electrocardiology, 2018, 51, 470-474.	0.9	4
62	Double-wave reentry in excitable media. Chaos, 2019, 29, 073103.	2.5	4
63	George Ralph Mines (1886â€“1914): the dawn of cardiac nonlinear dynamics. Journal of Physiology, 2016, 594, 2361-2371.	2.9	3
64	Universal mechanisms for self-termination of rapid cardiac rhythm. Chaos, 2020, 30, 121107.	2.5	3
65	BURSTING IN CELLULAR AUTOMATA AND CARDIAC ARRHYTHMIAS. , 2013, , 135-145.		1
66	Classification and recovery properties of isolated atriventricular node cells. Journal of Molecular and Cellular Cardiology, 1992, 24, 267.	1.9	0
67	Reduced Cell Surface Stability Of Rescued Herg Trafficking Mutants. Biophysical Journal, 2009, 96, 331a.	0.5	0
68	Historical note on the untimely passing of George Ralph Mines. Journal of Physiology, 2016, 594, 2373-2373.	2.9	0
69	Acid-Induced Chloride Current in Distal Convoluted Tubule. Biophysical Journal, 2016, 110, 353a.	0.5	0
70	Optogenetic Control of Re-Entrant Waves Demonstrated in Human Induced Stem Cell Derived Cardiomyocytes (hiPSC-CMs). Biophysical Journal, 2019, 116, 100a.	0.5	0
71	10.1063/5.0033813.1. , 2020, , .		0