Edward G Lakatta

List of Publications by Year
in descending order

69 papers	10,678 citations	66234 42 h-index	91712 69 g-index
75 all docs	75 docs citations	75 times ranked	10660 citing authors

#	Article	IF	Citations
1	Arterial and Cardiac Aging: Major Shareholders in Cardiovascular Disease Enterprises. Circulation, 2003, 107, 139-146.	1.6	1,925
2	Arterial and Cardiac Aging: Major Shareholders in Cardiovascular Disease Enterprises. Circulation, 2003, 107, 346-354.	1.6	1,057
3	Arterial and Cardiac Aging: Major Shareholders in Cardiovascular Disease Enterprises. Circulation, 2003, 107, 490-497.	1.6	886
4	A Coupled SYSTEM of Intracellular Ca²⁺Clocks and Surface Membrane Voltage Clocks Controls the Timekeeping Mechanism of the Heartâ€™s Pacemaker. Circulation Research, 2010, 106, 659-673.	2.0	567
5	Paclitaxel Stent Coating Inhibits Neointimal Hyperplasia at 4 Weeks in a Porcine Model of Coronary Restenosis. Circulation, 2001, 103, 2289-2295.	1.6	401
6	Genome-wide association study of PR interval. Nature Genetics, 2010, 42, 153-159.	9.4	400
7	Age-associated cardiovascular changes in health: impact on cardiovascular disease in older persons. Heart Failure Reviews, 2002, 7, 29-49.	1.7	354
8	Sinoatrial Nodal Cell Ryanodine Receptor and Na ⁺ -Ca ²⁺ Exchanger. Circulation Research, 2001, 88, 1254-1258.	2.0	344
9	Î²-Adrenergic Stimulation Modulates Ryanodine Receptor Ca 2+ Release During Diastolic Depolarization to Accelerate Pacemaker Activity in Rabbit Sinoatrial Nodal Cells. Circulation Research, 2002, 90, 73-79.	2.0	300
10	Biophysical Characterization of the Underappreciated and Important Relationship Between Heart Rate Variability and Heart Rate. Hypertension, 2014, 64, 1334-1343.	1.3	263
11	What keeps us ticking: a funny current, a calcium clock, or both?. Journal of Molecular and Cellular Cardiology, 2009, 47, 157-170.	0.9	255
12	Culture and adenoviral infection of adult mouse cardiac myocytes: methods for cellular genetic physiology. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 279, H429-H436.	1.5	243
13	Recent Advances in Cardiac Î² ₂ -Adrenergic Signal Transduction. Circulation Research, 1999, 85, 1092-1100.	2.0	226
14	Increased Carotid Artery Intimal-Medial Thickness in Asymptomatic Older Subjects With Exercise-Induced Myocardial Ischemia. Circulation, 1998, 98, 1504-1509.	1.6	218
15	Rhythmic Ryanodine Receptor Ca 2+ Releases During Diastolic Depolarization of Sinoatrial Pacemaker Cells Do Not Require Membrane Depolarization. Circulation Research, 2004, 94, 802-809.	2.0	156
16	Direct measurement of SR release flux by tracking â€˜Ca2+spikesâ€™ in rat cardiac myocytes. Journal of Physiology, 1998, 512, 677-691.	1.3	155
17	Functional implications of spontaneous sarcoplasmic reticulum Ca2+ release in the heart. Cardiovascular Research, 1992, 26, 193-214.	1.8	151
18	Longitudinal Perspective on the Conundrum of Central Arterial Stiffness, Blood Pressure, and Aging. Hypertension, 2014, 64, 1219-1227.	1.3	131

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19	Adenovirus-Mediated VEGF ₁₂₁ Gene Transfer Stimulates Angiogenesis in Normoperfused Skeletal Muscle and Preserves Tissue Perfusion After Induction of Ischemia. Circulation, 2000, 102, 565-571.	1.6	130
20	Cardiovascular Aging Research: The Next Horizons. Journal of the American Geriatrics Society, 1999, 47, 613-625.	1.3	124
21	Î² ₂ -Adrenergic cAMP Signaling Is Uncoupled From Phosphorylation of Cytoplasmic Proteins in Canine Heart. Circulation, 1999, 99, 2458-2465.	1.6	113
22	Which Arterial and Cardiac Parameters Best Predict Left Ventricular Mass?. Circulation, 1998, 98, 422-428.	1.6	111
23	Response of Failing Canine and Human Heart Cells to Î² ₂ -Adrenergic Stimulation. Circulation, 1995, 92, 1612-1618.	1.6	110
24	Role of Calcium/Calmodulin-Dependent Protein Kinase II in the Regulation of Vascular Smooth Muscle Cell Migration. Circulation, 1995, 91, 1107-1115.	1.6	99
25	Ca2+-stimulated Basal Adenylyl Cyclase Activity Localization in Membrane Lipid Microdomains of Cardiac Sinoatrial Nodal Pacemaker Cells. Journal of Biological Chemistry, 2008, 283, 14461-14468.	1.6	96
26	Calcium Cycling Protein Density and Functional Importance to Automaticity of Isolated Sinoatrial Nodal Cells Are Independent of Cell Size. Circulation Research, 2007, 100, 1723-1731.	2.0	95
27	Hormone Replacement Therapy and Longitudinal Changes in Blood Pressure in Postmenopausal Women. Annals of Internal Medicine, 2001, 135, 229.	2.0	89
28	A coupled-clock system drives the automaticity of human sinoatrial nodal pacemaker cells. Science Signaling, 2018, 11, .	1.6	85
29	Sarcoplasmic Reticulum Ca ²⁺ Pumping Kinetics Regulates Timing of Local Ca ²⁺ Releases and Spontaneous Beating Rate of Rabbit Sinoatrial Node Pacemaker Cells. Circulation Research, 2010, 107, 767-775.	2.0	74
30	Measurement variation of aortic pulse wave velocity in the elderly. American Journal of Hypertension, 2001, 14, 463-468.	1.0	72
31	â€˜Cross Talkâ€™ Between Opioid Peptide and Adrenergic Receptor Signaling in Isolated Rat Heart. Circulation, 1997, 95, 2122-2129.	1.6	72
32	PR interval genome-wide association meta-analysis identifies 50 loci associated with atrial and atrioventricular electrical activity. Nature Communications, 2018, 9, 2904.	5.8	71
33	Neuroticism, coronary artery disease, and chest pain complaints: Cross-sectional and longitudinal studies. Experimental Aging Research, 1982, 8, 37-44.	0.6	70
34	Synchronized Cardiac Impulses Emerge From Heterogeneous Local Calcium Signals Within and Among Cells of Pacemaker Tissue. JACC: Clinical Electrophysiology, 2020, 6, 907-931.	1.3	69
35	Partial depletion of sarcoplasmic reticulum calcium does not prevent calcium sparks in Rat Ventricular myocytes. Journal of Physiology, 1997, 505, 665-675.	1.3	64
36	Pharmacological Strategies to Retard Cardiovascular Aging. Circulation Research, 2016, 118, 1626-1642.	2.0	64

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37	The "Heartbreak" of Older Age. Molecular Interventions: Pharmacological Perspectives From Biology, Chemistry and Genomics, 2002, 2, 431-446.	3.4	63
38	Arterial Stiffness and Risk of Overall Heart Failure, Heart Failure With Preserved Ejection Fraction, and Heart Failure With Reduced Ejection Fraction. Hypertension, 2017, 69, 267-274.	1.3	62
39	Synchronization of Stochastic Ca2+ Release Units Creates a Rhythmic Ca2+ Clock in Cardiac Pacemaker Cells. Biophysical Journal, 2011, 100, 271-283.	0.2	61
40	Multi-ancestry GWAS of the electrocardiographic PR interval identifies 202 loci underlying cardiac conduction. Nature Communications, 2020, 11, 2542.	5.8	59
41	Constitutive Î²2-adrenergic signalling enhances sarcoplasmic reticulum Ca2+cycling to augment contraction in mouse heart. Journal of Physiology, 1999, 521, 351-361.	1.3	57
42	The Integration of Spontaneous Intracellular Ca2+ Cycling and Surface Membrane Ion Channel Activation Entrains Normal Automaticity in Cells of the Heart's Pacemaker. Annals of the New York Academy of Sciences, 2006, 1080, 178-206.	1.8	57
43	Beat-to-Beat Variation in Periodicity of Local Calcium Releases Contributes to Intrinsic Variations of Spontaneous Cycle Length in Isolated Single Sinoatrial Node Cells. PLoS ONE, 2013, 8, e67247.	1.1	48
44	Positive Feedback Mechanisms among Local Ca Releases, NCX, and ICaL Ignite Pacemaker Action Potentials. Biophysical Journal, 2018, 114, 1176-1189.	0.2	47
45	Electrophysiological heterogeneity of pacemaker cells in the rabbit intercaval region, including the SA node: insights from recording multiple ion currents in each cell. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 314, H403-H414.	1.5	47
46	Heterogeneity of calcium clock functions in dormant, dysrhythmically and rhythmically firing single pacemaker cells isolated from SA node. Cell Calcium, 2018, 74, 168-179.	1.1	45
47	Ca2+-regulated-cAMP/PKA signaling in cardiac pacemaker cells links ATP supply to demand. Journal of Molecular and Cellular Cardiology, 2011, 51, 740-748.	0.9	44
48	Numerical models based on a minimal set of sarcolemmal electrogenic proteins and an intracellular Ca2+ clock generate robust, flexible, and energy-efficient cardiac pacemaking. Journal of Molecular and Cellular Cardiology, 2013, 59, 181-195.	0.9	44
49	Real-time relationship between PKA biochemical signal network dynamics and increased action potential firing rate in heart pacemaker cells. Journal of Molecular and Cellular Cardiology, 2015, 86, 168-178.	0.9	38
50	Mechanisms of Beat-to-Beat Regulation of Cardiac Pacemaker Cell Function by Ca2+ Cycling Dynamics. Biophysical Journal, 2013, 105, 1551-1561.	0.2	34
51	Cardiac synthesis, processing, and coronary release of enkephalin-related peptides. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 279, H1989-H1998.	1.5	33
52	Hemodynamic effects of unloading the old heart. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 277, H1863-H1871.	1.5	31
53	Endoplasmic Reticulum Ca ²⁺ Depletion Unmasks a Caffeine-Induced Ca ²⁺ Influx in Human Aortic Endothelial Cells. Circulation Research, 1995, 77, 927-935.	2.0	30
54	The Old Heart: Operating on the Edge. Novartis Foundation Symposium, 2008, 235, 172-201.	1.2	28

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55	Arterial aging is risky. Journal of Applied Physiology, 2008, 105, 1321-1322.	1.2	25
56	Basal Spontaneous Firing of Rabbit Sinoatrial Node Cells Is Regulated by Dual Activation of PDEs (Phosphodiesterases) 3 and 4. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005896.	2.1	23
57	Cardiovascular reserve capacity in healthy older humans. Aging Clinical and Experimental Research, 1994, 6, 213-223.	1.4	20
58	Endothelium-independent relaxation of aortic rings by the nitric oxide synthase inhibitor diphenyleneiodonium. British Journal of Pharmacology, 1997, 120, 857-864.	2.7	17
59	cAMP-Dependent Signaling Restores AP Firing in Dormant SA Node Cells via Enhancement of Surface Membrane Currents and Calcium Coupling. Frontiers in Physiology, 2021, 12, 596832.	1.3	17
60	Ca2+ and Membrane Potential Transitions During Action Potentials Are Self-Similar to Each Other and to Variability of AP Firing Intervals Across the Broad Physiologic Range of AP Intervals During Autonomic Receptor Stimulation. Frontiers in Physiology, 2021, 12, 612770.	1.3	15
61	Mechanisms of altered Î²-adrenergic modulation of the cardiovascular system with aging. Reviews in Clinical Gerontology, 1991, 1, 309-322.	0.5	14
62	Research Agenda for Cardiovascular Aging: Humans to Molecules. The American Journal of Geriatric Cardiology, 2000, 9, 251-262.	0.7	12
63	Hemodynamic Adaptations to Stress with Advancing Age. Acta Medica Scandinavica, 1986, 220, 39-52.	0.0	12
64	Computer algorithms for automated detection and analysis of local Ca2+ releases in spontaneously beating cardiac pacemaker cells. PLoS ONE, 2017, 12, e0179419.	1.1	10
65	Self-Similar Synchronization of Calcium and Membrane Potential Transitions During ActionÂPotential Cycles Predict Heart Rate Across Species. JACC: Clinical Electrophysiology, 2021, 7, 1331-1344.	1.3	8
66	Symposium VI: Calcium Homeostasis in Cardiac Myocytes: Î²-Adrenergic Stimulation Modulation of Heart Rate via Synchronization of Ryanodine Receptor Ca2+ Release. Journal of Cardiac Surgery, 2010, 17, 451-461.	0.3	6
67	Cardiovascular Aging: Perspectives From Humans to Rodents. The American Journal of Geriatric Cardiology, 1998, 7, 32-45.	0.7	6
68	Electrically Dormant Sinoatrial Nodal Cells (SANC) are Awakened by Increased Camp-Dependent Phosphorylation of Coupled-Clock Proteins. Biophysical Journal, 2017, 112, 402a-403a.	0.2	3
69	Beta-adrenergic stimulation modulation of heart rate via synchronization of ryanodine receptor Ca2+ release. Journal of Cardiac Surgery, 2002, 17, 451-61.	0.3	3