Bence Hegyi

List of Publications by Year
in descending order

68 papers	1,255 citations	394286 19 h-index	395590 33 g-index
69 all docs	69 docs citations	69 times ranked	1596 citing authors

#	Article	IF	Citations
1	Autoregulation of excitation-Ca2+ signaling-contraction in cardiomyocyte under mechanical load. Biophysical Journal, 2022, 121, 155a.	0.2	0
2	Initiation and maintenance of arrhythmogenic action potential waves near the infarct zone in heart failure. Biophysical Journal, 2022, 121, 89a-90a.	0.2	0
3	Empagliflozin Reverses Late Na ⁺ Current Enhancement and Cardiomyocyte Proarrhythmia in a Translational Murine Model of Heart Failure With Preserved Ejection Fraction. Circulation, 2022, 145, 1029-1031.	1.6	27
4	Fixing a current problem in the cardiac Na channel. , 2022, 1, 408-409.		0
5	Modeling cardiomyocyte mechanics and autoregulation of contractility by mechano-chemo-transduction feedback. IScience, 2022, 25, 104667.	1.9	0
6	Arrhythmogenic Crosstalk of Sodium, Calcium, Reactive Oxygen Species and Camkii Signaling in the Failing Rabbit Ventricular Myocyte - Insights from a Computational Study. Biophysical Journal, 2021, 120, 239a.	0.2	0
7	Mechanical Load Regulates Excitation-Ca ²⁺ Signaling-Contraction in Cardiomyocyte. Circulation Research, 2021, 128, 772-774.	2.0	9
8	CaMKII Serine 280 O-GlcNAcylation Links Diabetic Hyperglycemia to Proarrhythmia. Circulation Research, 2021, 129, 98-113.	2.0	38
9	Emergence of Mechano-Sensitive Contraction Autoregulation in Cardiomyocytes. Life, 2021, 11, 503.	1.1	2
10	Mechanoelectric coupling and arrhythmogenesis in cardiomyocytes contracting under mechanical afterload in a 3D viscoelastic hydrogel. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2108484118.	3.3	14
11	A viscoelastic Eshelby inclusion model and analysis of the Cell-in-Gel system. International Journal of Engineering Science, 2021, 165, 103489.	2.7	6
12	Two-hit mechanism of cardiac arrhythmias in diabetic hyperglycaemia: reduced repolarization reserve, neurohormonal stimulation, and heart failure exacerbate susceptibility. Cardiovascular Research, 2021, 117, 2781-2793.	1.8	26
13	Cardiomyocyte Na+ and Ca2+ mishandling drives vicious cycle involving CaMKII, ROS, and ryanodine receptors. Basic Research in Cardiology, 2021, 116, 58.	2.5	33
14	Quantitative cross-species translators of cardiac myocyte electrophysiology: Model training, experimental validation, and applications. Science Advances, 2021, 7, eabg0927.	4.7	22
15	Mechanical Load on Cardiomyocyte Activates Mechano-Chemo-Transduction to Autoregulate Ca2+ Signaling and Contractility. Biophysical Journal, 2020, 118, 409a.	0.2	0
16	Increased SR Calcium Leak is Promoted by O-GlcNAcylation of CaMKII in Diabetes and Hyperglycemia. Biophysical Journal, 2020, 118, 253a.	0.2	0
17	Hyperglycemia regulates cardiac K+ channels via O-GlcNAc-CaMKII and NOX2-ROS-PKC pathways. Basic Research in Cardiology, 2020, 115, 71.	2.5	43
18	O-Glycosylation of Camkii at Serine 280 Promotes Cardiac Arrhythmias in Diabetic Hyperglycemia. Biophysical Journal, 2020, 118, 103a.	0.2	0

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19	Metabolic Maturation Media Improve Physiological Function of Human iPSC-Derived Cardiomyocytes. Cell Reports, 2020, 32, 107925.	2.9	198
20	Balance Between Rapid Delayed Rectifier K ⁺ Current and Late Na ⁺ Current on Ventricular Repolarization. Circulation: Arrhythmia and Electrophysiology, 2020, 13, e008130.	2.1	16
21	Mechanical Load Effects on Cardiac Action Potential and Arrhythmogenic Ca2+Activitiesrevealed by a Novel Patch-Clamp-In-Gel Technology. Biophysical Journal, 2019, 116, 97a.	0.2	0
22	Altered K+ current profiles underlie cardiac action potential shortening in hyperkalemia and Î²-adrenergic stimulation. Canadian Journal of Physiology and Pharmacology, 2019, 97, 773-780.	0.7	6
23	Quantitative In Silico Analysis of the Arrhythmogenic CaMKII-Sodium-Calcium-CaMKII Feedback in the Failing Rabbit Ventricular Myocyte. Biophysical Journal, 2019, 116, 94a-95a.	0.2	0
24	Enhanced Depolarization Drive in Failing Rabbit Ventricular Myocytes. Circulation: Arrhythmia and Electrophysiology, 2019, 12, e007061.	2.1	29
25	Diabetic Hyperglycemia Regulates Potassium Channels and Arrhythmias in the Heart via Autonomous CaMKII Activation by O-Linked Glycosylation. Biophysical Journal, 2019, 116, 98a.	0.2	5
26	CaMKII signaling in heart diseases: Emerging role in diabetic cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2019, 127, 246-259.	0.9	92
27	Altered Repolarization Reserve in Failing Rabbit Ventricular Myocytes. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005852.	2.1	30
28	Mechanotransduction via No Signaling Auto-Regulates Cardiomyocyte Contractility. Biophysical Journal, 2018, 114, 620a.	0.2	0
29	Complex electrophysiological remodeling in postinfarction ischemic heart failure. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3036-E3044.	3.3	72
30	Action potential contour contributes to species differences in repolarization response to Î²-adrenergic stimulation. Europace, 2018, 20, 1543-1552.	0.7	22
31	Mechanical Load Effects on Cardiomyocyte Action Potential, Cacium Transient, and Contraction Revealed by using a Novel Patch-Clamp-in-Gel Technology. Biophysical Journal, 2018, 114, 620a.	0.2	1
32	A Mathematical Model of a Pig Ventricular Myocyte. Biophysical Journal, 2018, 114, 471a.	0.2	0
33	Î²-adrenergic regulation of late Na+ current during cardiac action potential is mediated by both PKA and CaMKII. Journal of Molecular and Cellular Cardiology, 2018, 123, 168-179.	0.9	55
34	Transient receptor potential melastatin 4 channel inhibitor 9-phenanthrol inhibits K⁺ but not Ca²⁺ currents in canine ventricular myocytes. Canadian Journal of Physiology and Pharmacology, 2018, 96, 1022-1029.	0.7	19
35	Ionic Current Changes during Action Potentials in Porcine Post-MI Heart Failure Model. Biophysical Journal, 2017, 112, 402a.	0.2	0
36	Calcium Activated Chloride Current in Mammalian Ventricular Myocytes. Biophysical Journal, 2017, 112, 36a.	0.2	1

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37	Mechano-chemo-transduction is attenuated in a rabbit model of heart failure. Journal of Molecular and Cellular Cardiology, 2017, 112, 147.	0.9	0
38	Identification of cardiomyocytes' characteristics responsible for dynamical changes in calcium profile in response to mechano-chemo transduction. Journal of Molecular and Cellular Cardiology, 2017, 112, 168.	0.9	0
39	Ca2+-activated Clâ^' current is antiarrhythmic by reducing both spatial and temporal heterogeneity of cardiac repolarization. Journal of Molecular and Cellular Cardiology, 2017, 109, 27-37.	0.9	18
40	Recording of Ionic Currents Under Physiological Conditions: Action Potential-Clamp and â€˜Onion-Peelingâ€™ Techniques. , 2017, , 31-48.		6
41	Determination of the Upper Bound of Intracellular [Na+] by Electrophysiological Method: Probing the Subsarcolemmal [Na+]. Biophysical Journal, 2016, 110, 587a.	0.2	0
42	Sarcolemmal Ca 2+ -entry through L-type Ca 2+ channels controls the profile of Ca 2+ -activated Cl â^' current in canine ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2016, 97, 125-139.	0.9	20
43	Electrophysiological Determination of Submembrane Na + Concentration in Cardiac Myocytes. Biophysical Journal, 2016, 111, 1304-1315.	0.2	12
44	CaMKII Inhibitor KN-93 Directly Blocks IKr in Cardiac Myocytes. Biophysical Journal, 2016, 110, 273a.	0.2	0
45	Mechano-Chemo-Transduction in Rabbit Cardiomyocytes Mediated by no Signaling. Biophysical Journal, 2016, 110, 600a.	0.2	0
46	Concept of relative variability of cardiac action potential duration and its test under various experimental conditions. General Physiology and Biophysics, 2016, 35, 55-62.	0.4	7
47	Cytosolic calcium changes affect the incidence of early afterdepolarizations in canine ventricular myocytes. Canadian Journal of Physiology and Pharmacology, 2015, 93, 527-534.	0.7	13
48	Oxidative shift in tissue redox potential increases beat-to-beat variability of action potential duration. Canadian Journal of Physiology and Pharmacology, 2015, 93, 563-568.	0.7	7
49	KN-93 inhibits IKr in mammalian cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2015, 89, 173-176.	0.9	28
50	9â€"Anthracene carboxylic acid is more suitable than DIDS for characterization of calcium-activated chloride current during canine ventricular action potential. Naunyn-Schmiedeberg's Archives of Pharmacology, 2015, 388, 87-100.	1.4	9
51	Contribution of ion currents to beat-to-beat variability of action potential duration in canine ventricular myocytes. Pflugers Archiv European Journal of Physiology, 2015, 467, 1431-1443.	1.3	40
52	KCNJ15/Kir4.2 couples with polyamines to sense weak extracellular electric fields in galvanotaxis. Nature Communications, 2015, 6, 8532.	5.8	83
53	Hypermuscular mice with mutation in the myostatin gene display altered calcium signalling. Journal of Physiology, 2014, 592, 1353-1365.	1.3	24
54	Asynchronous activation of calcium and potassium currents by isoproterenol in canine ventricular myocytes. Naunyn-Schmiedeberg's Archives of Pharmacology, 2014, 387, 457-467.	1.4	15

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55	Action Potential Shape Differences Set Species-Dependent Î²-Adrenergic-Stimulation Response. Biophysical Journal, 2014, 106, 119a.	0.2	0
56	The Janus Face of Adenosine: Antiarrhythmic and Proarrhythmic Actions. Current Pharmaceutical Design, 2014, 21, 965-976.	0.9	21
57	Class IV Antiarrhythmic Agents: New Compounds Using an Old Strategy. Current Pharmaceutical Design, 2014, 21, 977-1010.	0.9	9
58	Chemistry, Physiology, and Pharmacology of β.-Adrenergic Mechanisms in the Heart. Why are .β-Blocker Antiarrhythmics Superior?. Current Pharmaceutical Design, 2014, 21, 1030-1041.	0.9	12
59	Effects of tacrolimus on action potential configuration and transmembrane ion currents in canine ventricular cells. Naunyn-Schmiedeberg's Archives of Pharmacology, 2013, 386, 239-246.	1.4	6
60	Myostatin Deficient Mice Display Altered Calcium Signaling. Biophysical Journal, 2013, 104, 289a.	0.2	0
61	Dynamics of the late Na+ current during cardiac action potential and its contribution to afterdepolarizations. Journal of Molecular and Cellular Cardiology, 2013, 64, 59-68.	0.9	86
62	Effects of pioglitazone on cardiac ion currents and action potential morphology in canine ventricular myocytes. European Journal of Pharmacology, 2013, 710, 10-19.	1.7	6
63	Tetrodotoxin Blockade on Canine Cardiac L-Type Ca2+ Channels Depends on pH and Redox Potential. Marine Drugs, 2013, 11, 2140-2153.	2.2	10
64	Selectivity Problems with Drugs Acting on Cardiac Na⁺ and Ca²⁺ Channels. Current Medicinal Chemistry, 2013, 20, 2552-2571.	1.2	12
65	Role of action potential configuration and the contribution of Ca²⁺ and K⁺ currents to isoprenalineâ€induced changes in canine ventricular cells. British Journal of Pharmacology, 2012, 167, 599-611.	2.7	19
66	Tetrodotoxin blocks L-type Ca2+ channels in canine ventricular cardiomyocytes. Pflugers Archiv European Journal of Physiology, 2012, 464, 167-174.	1.3	21
67	Interaction between <scp>C</scp>a²⁺ channel blockers and isoproterenol on <scp>L</scp>â€type <scp>C</scp>a²⁺ current in canine ventricular cardiomyocytes. Acta Physiologica, 2012, 206, 42-50.	1.8	3
68	Modified cAMP Derivatives: Powerful Tools in Heart Research. Current Medicinal Chemistry, 2011, 18, 3729-3736.	1.2	2