Luis F Santana

List of Publications by Year
in descending order

115 papers	8,143 citations	44069 48 h-index	48315 88 g-index
126 all docs	126 docs citations	126 times ranked	7772 citing authors

#	Article	IF	Citations
1	Defective Excitation-Contraction Coupling in Experimental Cardiac Hypertrophy and Heart Failure. Science, 1997, 276, 800-806.	12.6	715
2	Mitochondrial Oxidative Stress Mediates Angiotensin IIâ€"Induced Cardiac Hypertrophy and GÎ±q Overexpressionâ€"Induced Heart Failure. Circulation Research, 2011, 108, 837-846.	4.5	450
3	Overexpression of Catalase Targeted to Mitochondria Attenuates Murine Cardiac Aging. Circulation, 2009, 119, 2789-2797.	1.6	414
4	Phosphoinositide 3-Kinase Binds to TRPV1 and Mediates NGF-stimulated TRPV1 Trafficking to the Plasma Membrane. Journal of General Physiology, 2006, 128, 509-522.	1.9	342
5	Mitochondrial Targeted Antioxidant Peptide Ameliorates Hypertensive Cardiomyopathy. Journal of the American College of Cardiology, 2011, 58, 73-82.	2.8	314
6	Two mechanisms of quantized calcium release in skeletal muscle. Nature, 1996, 379, 455-458.	27.8	310
7	Modulation of the molecular composition of large conductance, Ca2+ activated K+ channels in vascular smooth muscle during hypertension. Journal of Clinical Investigation, 2003, 112, 717-724.	8.2	208
8	Constitutively active L-type Ca2+ channels. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11112-11117.	7.1	185
9	Downregulation of the BK Channel Î²1 Subunit in Genetic Hypertension. Circulation Research, 2003, 93, 965-971.	4.5	179
10	Ca2+ Flux Through Promiscuous Cardiac Na+ Channels: Slip-Mode Conductance. Science, 1998, 279, 1027-1033.	12.6	164
11	Sympathetic Stimulation of Adult Cardiomyocytes Requires Association of AKAP5 With a Subpopulation of L-Type Calcium Channels. Circulation Research, 2010, 107, 747-756.	4.5	163
12	AKAP150-dependent cooperative TRPV4 channel gating is central to endothelium-dependent vasodilation and is disrupted in hypertension. Science Signaling, 2014, 7, ra66.	3.6	151
13	Increased Coupled Gating of L-Type Ca ²⁺ Channels During Hypertension and Timothy Syndrome. Circulation Research, 2010, 106, 748-756.	4.5	134
14	Calcium Sparks and Excitation-Contraction Coupling in Phospholamban-Deficient Mouse Ventricular Myocytes. Journal of Physiology, 1997, 503, 21-29.	2.9	129
15	Modulation of the molecular composition of large conductance, Ca2+ activated K+ channels in vascular smooth muscle during hypertension. Journal of Clinical Investigation, 2003, 112, 717-724.	8.2	124
16	Role of Sodium Channel Deglycosylation in the Genesis of Cardiac Arrhythmias in Heart Failure. Journal of Biological Chemistry, 2001, 276, 28197-28203.	3.4	123
17	An entirely specific type I A-kinase anchoring protein that can sequester two molecules of protein kinase A at mitochondria. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E1227-35.	7.1	121
18	AKAP150 Is Required for Stuttering Persistent Ca ²⁺ Sparklets and Angiotensin IIâ€"Induced Hypertension. Circulation Research, 2008, 102, e1-e11.	4.5	120

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19	Microtubule-Mediated Defects in Junctophilin-2 Trafficking Contribute to Myocyte Transverse-Tubule Remodeling and Ca ²⁺ Handling Dysfunction in Heart Failure. Circulation, 2014, 129, 1742-1750.	1.6	116
20	Dystrophin-deficient cardiomyocytes derived from human urine: New biologic reagents for drug discovery. Stem Cell Research, 2014, 12, 467-480.	0.7	116
21	Activation of NFATc3 Down-regulates the Î²1 Subunit of Large Conductance, Calcium-activated K+ Channels in Arterial Smooth Muscle and Contributes to Hypertension. Journal of Biological Chemistry, 2007, 282, 3231-3240.	3.4	113
22	Mechanisms Underlying Heterogeneous Ca2+ Sparklet Activity in Arterial Smooth Muscle. Journal of General Physiology, 2006, 127, 611-622.	1.9	108
23	Ca ²⁺ signaling amplification by oligomerization of L-type Ca _v 1.2 channels. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1749-1754.	7.1	104
24	Local Ca2+ Signaling and EC Coupling in Heart: Ca2+ Sparks and the Regulation of the [Ca2+]i Transient. Journal of Molecular and Cellular Cardiology, 2002, 34, 941-950.	1.9	99
25	Graded Ca2+/calmodulin-dependent coupling of voltage-gated CaV1.2 channels. ELife, 2015, 4, .	6.0	97
26	The control of Ca ²⁺ influx and NFATc3 signaling in arterial smooth muscle during hypertension. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15623-15628.	7.1	94
27	Restoration of Normal L-Type Ca ²⁺ Channel Function During Timothy Syndrome by Ablation of an Anchoring Protein. Circulation Research, 2011, 109, 255-261.	4.5	93
28	Functional coupling of calcineurin and protein kinase A in mouse ventricular myocytes. Journal of Physiology, 2002, 544, 57-69.	2.9	92
29	NFATc3 Regulates Kv2.1 Expression in Arterial Smooth Muscle. Journal of Biological Chemistry, 2004, 279, 47326-47334.	3.4	92
30	NFATc3-Induced Reductions in Voltage-Gated K + Currents After Myocardial Infarction. Circulation Research, 2004, 94, 1340-1350.	4.5	90
31	AKAP150 Contributes to Enhanced Vascular Tone by Facilitating Large-Conductance Ca ²⁺ -Activated K ⁺ Channel Remodeling in Hyperglycemia and Diabetes Mellitus. Circulation Research, 2014, 114, 607-615.	4.5	86
32	Local control of TRPV4 channels by AKAP150-targeted PKC in arterial smooth muscle. Journal of General Physiology, 2014, 143, 559-575.	1.9	86
33	Calcium sparklets regulate local and global calcium in murine arterial smooth muscle. Journal of Physiology, 2007, 579, 187-201.	2.9	85
34	Kv2 channels oppose myogenic constriction of rat cerebral arteries. American Journal of Physiology - Cell Physiology, 2006, 291, C348-C356.	4.6	83
35	Alterations in Early Action Potential Repolarization Causes Localized Failure of Sarcoplasmic Reticulum Ca 2+ Release. Circulation Research, 2005, 96, 543-550.	4.5	81
36	Elevated Ca²⁺ sparklet activity during acute hyperglycemia and diabetes in cerebral arterial smooth muscle cells. American Journal of Physiology - Cell Physiology, 2010, 298, C211-C220.	4.6	80

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37	Phosphodiesterase 8A (PDE8A) regulates excitationâ€“contraction coupling in ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2010, 49, 330-333.	1.9	74
38	Differential Calcineurin/NFATc3 Activity Contributes to the <i>I</i> _{to} Transmural Gradient in the Mouse Heart. Circulation Research, 2006, 98, 1306-1313.	4.5	73
39	A-Kinase Anchoring Proteins. Circulation, 2010, 121, 1264-1271.	1.6	72
40	Knockout of Na⁺/Ca²⁺ exchanger in smooth muscle attenuates vasoconstriction and L-type Ca²⁺ channel current and lowers blood pressure. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1472-H1483.	3.2	71
41	Anchored phosphatases modulate glucose homeostasis. EMBO Journal, 2012, 31, 3991-4004.	7.8	69
42	Local Control of Excitation-Contraction Coupling in Human Embryonic Stem Cell-Derived Cardiomyocytes. PLoS ONE, 2009, 4, e5407.	2.5	69
43	Probing the Effects of Membrane Cholesterol in the Torpedo californica Acetylcholine Receptor and the Novel Lipid-exposed Mutation Î±C418W in XenopusOocytes. Journal of Biological Chemistry, 2001, 276, 46523-46532.	3.4	65
44	Kv2.1 mediates spatial and functional coupling of L-type calcium channels and ryanodine receptors in mammalian neurons. ELife, 2019, 8, .	6.0	63
45	Ca2+ entry into neurons is facilitated by cooperative gating of clustered CaV1.3 channels. ELife, 2016, 5, .	6.0	61
46	Myostatin represses physiological hypertrophy of the heart and excitationâ€“contraction coupling. Journal of Physiology, 2009, 587, 4873-4886.	2.9	58
47	CaV1.2 sparklets in heart and vascular smooth muscle. Journal of Molecular and Cellular Cardiology, 2013, 58, 67-76.	1.9	51
48	Cav1.3 channels produce persistent calcium sparklets, but Cav1.2 channels are responsible for sparklets in mouse arterial smooth muscle. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H1359-H1370.	3.2	50
49	Eosinophil Cysteinyl Leukotriene Synthesis Mediated by Exogenous Secreted Phospholipase A2 Group X. Journal of Biological Chemistry, 2010, 285, 41491-41500.	3.4	50
50	Mechanisms underlying variations in excitation-contraction coupling across the mouse left ventricular free wall. Journal of Physiology, 2006, 572, 227-241.	2.9	48
51	Proximal clustering between BK and CaV1.3 channels promotes functional coupling and BK channel activation at low voltage. ELife, 2017, 6, .	6.0	48
52	Oxidative stress decreases microtubule growth and stability in ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2016, 93, 32-43.	1.9	47
53	A mitotic kinase scaffold depleted in testicular seminomas impacts spindle orientation in germ line stem cells. ELife, 2015, 4, e09384.	6.0	44
54	Mechanisms and physiological implications of cooperative gating of clustered ion channels. Physiological Reviews, 2022, 102, 1159-1210.	28.8	44

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55	BIN1 Induces the Formation of T-Tubules and Adult-Like Ca2+ Release Units in Developing Cardiomyocytes. Stem Cells, 2019, 37, 54-64.	3.2	43
56	Single nucleotide polymorphisms alter kinase anchoring and the subcellular targeting of A-kinase anchoring proteins. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E11465-E11474.	7.1	41
57	Distance constraints on activation of TRPV4 channels by AKAP150-bound PKCÎ± in arterial myocytes. Journal of General Physiology, 2017, 149, 639-659.	1.9	40
58	A toolbox of nanobodies developed and validated for use as intrabodies and nanoscale immunolabels in mammalian brain neurons. ELife, 2019, 8, .	6.0	39
59	Molecular and biophysical mechanisms of Ca2+ sparklets in smooth muscle. Journal of Molecular and Cellular Cardiology, 2009, 47, 436-444.	1.9	36
60	Loss of AKAP150 promotes pathological remodelling and heart failure propensity by disrupting calcium cycling and contractile reserve. Cardiovascular Research, 2017, 113, 147-159.	3.8	36
61	How does the shape of the cardiac action potential control calcium signaling and contraction in the heart?. Journal of Molecular and Cellular Cardiology, 2010, 49, 901-903.	1.9	35
62	Adenylyl cyclase 5â€"generated cAMP controls cerebral vascular reactivity during diabetic hyperglycemia. Journal of Clinical Investigation, 2019, 129, 3140-3152.	8.2	35
63	A stochastic model of ion channel cluster formation in the plasma membrane. Journal of General Physiology, 2019, 151, 1116-1134.	1.9	34
64	NFATc3-dependent loss of Ito gradient across the left ventricular wall during chronic Î² adrenergic stimulation. Journal of Molecular and Cellular Cardiology, 2009, 46, 249-256.	1.9	33
65	A Gs-coupled purinergic receptor boosts Ca2+ influx and vascular contractility during diabetic hyperglycemia. ELife, 2019, 8, .	6.0	33
66	CALCIUM SPARKLETS IN ARTERIAL SMOOTH MUSCLE. Clinical and Experimental Pharmacology and Physiology, 2008, 35, 1121-1126.	1.9	32
67	Disease-associated mutations in Niemann-Pick type C1 alter ER calcium signaling and neuronal plasticity. Journal of Cell Biology, 2019, 218, 4141-4156.	5.2	32
68	Impaired BKCa channel function in native vascular smooth muscle from humans with type 2 diabetes. Scientific Reports, 2017, 7, 14058.	3.3	31
69	Downâ€regulation of Ca_V1.2 channels during hypertension: how fewer Ca_V1.2 channels allow more Ca²⁺ into hypertensive arterial smooth muscle. Journal of Physiology, 2013, 591, 6175-6191.	2.9	29
70	Dynamic L-type CaV1.2 channel trafficking facilitates CaV1.2 clustering and cooperative gating. Biochimica Et Biophysica Acta - Molecular Cell Research, 2018, 1865, 1341-1355.	4.1	29
71	Relationship between Ca²⁺sparklets and sarcoplasmic reticulum Ca²⁺load and release in rat cerebral arterial smooth muscle. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 301, H2285-H2294.	3.2	28
72	Kv2.1 channels play opposing roles in regulating membrane potential, Ca ²⁺ channel function, and myogenic tone in arterial smooth muscle. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3858-3866.	7.1	28

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73	Dynamic Changes in Sarcoplasmic Reticulum Structure in Ventricular Myocytes. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-14.	3.0	26
74	Cellular mechanisms of ventricular arrhythmias in a mouse model of Timothy syndrome (long QT) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	1.9	26
75	The Organization of the Sinoatrial Node Microvasculature Varies Regionally to Match Local Myocyte Excitability. Function, 2021, 2, zqab031.	2.3	24
76	NFAT-Dependent Excitationâ€“Transcription Coupling in Heart. Circulation Research, 2008, 103, 681-683.	4.5	23
77	L-Type Ca2+ Channel Function During Timothy Syndrome. Trends in Cardiovascular Medicine, 2012, 22, 72-76.	4.9	23
78	Cardiomyocyte-Specific Expression of Lamin A Improves Cardiac Function in Lmnaâ^'/â^' Mice. PLoS ONE, 2012, 7, e42918.	2.5	23
79	AKAP150 participates in calcineurin/NFAT activation during the down-regulation of voltage-gated K+ currents in ventricular myocytes following myocardial infarction. Cellular Signalling, 2016, 28, 733-740.	3.6	23
80	Evolving Discovery of the Origin of the Heartbeat. JACC: Clinical Electrophysiology, 2020, 6, 932-934.	3.2	23
81	AKAP5 complex facilitates purinergic modulation of vascular L-type Ca2+ channel CaV1.2. Nature Communications, 2020, 11, 5303.	12.8	22
82	IP ₃ R-driven increases in mitochondrial Ca ²⁺ promote neuronal death in NPC disease. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	21
83	Regulation of neuronal excitationâ€“transcription coupling by Kv2.1-induced clustering of somatic L-type Ca ²⁺ channels at ER-PM junctions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
84	A model for cooperative gating of L-type Ca2+ channels and its effects on cardiac alternans dynamics. PLoS Computational Biology, 2018, 14, e1005906.	3.2	19
85	Regulation of L-type calcium channel sparklet activity by c-Src and PKC-Î±. American Journal of Physiology - Cell Physiology, 2013, 305, C568-C577.	4.6	15
86	The physiological sensor channels TRP and piezo: Nobel Prize in Physiology or Medicine 2021. Physiological Reviews, 2022, 102, 1153-1158.	28.8	15
87	Junctional sarcoplasmic reticulum motility in adult mouse ventricular myocytes. American Journal of Physiology - Cell Physiology, 2020, 318, C598-C604.	4.6	14
88	Biological noise is a key determinant of the reproducibility and adaptability of cardiac pacemaking and EC coupling. Journal of General Physiology, 2022, 154, .	1.9	14
89	Natural inequalities: why some L-type Ca2+ channels work harder than others. Journal of General Physiology, 2010, 136, 143-147.	1.9	13
90	Single Cell Transcriptional Profiling of Adult Mouse Cardiomyocytes. Journal of Visualized Experiments, 2011, , e3302.	0.3	13

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91	A Ca2+- and PKC-driven regulatory network in airway smooth muscle. Journal of General Physiology, 2013, 141, 161-164.	1.9	10
92	Genetically engineered mice for combinatorial cardiovascular optobiology. ELife, 2021, 10, .	6.0	9
93	A New Mutation in FIG4 Causes a Severe Form of CMT4J Involving TRPV4 in the Pathogenic Cascade. Journal of Neuropathology and Experimental Neurology, 2017, 76, 789-799.	1.7	8
94	Sodium Current and Arrhythmogenesis in Heart Failure. Heart Failure Clinics, 2005, 1, 193-205.	2.1	6
95	Metabolicâ€“electrical control of coronary blood flow. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8231-8233.	7.1	6
96	On the Loose: Uncaging Ca2+-induced Ca2+ Release in Smooth Muscle. Journal of General Physiology, 2006, 127, 221-223.	1.9	3
97	Ca2+ Signaling Amplification by Oligomerization of L-Type Cav1.2 Channels. Biophysical Journal, 2012, 102, 433a.	0.5	1
98	TRPML1ng on sparks. Science Signaling, 2020, 13, .	3.6	1
99	The role of TRPV4 in rat parenchymal arterioles. FASEB Journal, 2010, 24, .	0.5	1
100	SMAKing Ca²⁺ sparks in arterial myocytes. Journal of Physiology, 2007, 584, 1-1.	2.9	0
101	Anchored phosphatases modulate glucose homeostasis. EMBO Journal, 2012, 31, 4481-4481.	7.8	0
102	Adding Accessories for Hypertension. Hypertension, 2012, 60, 894-895.	2.7	0
103	The long and winding road home: How junctin and triadin find their way to the junctional SR. Journal of Molecular and Cellular Cardiology, 2015, 81, 15-17.	1.9	0
104	Maladaptive response of arterial myocytes to chronic exposure to Ca2+channel blockers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18151-18153.	7.1	0
105	Roles of câ€Src and PKC in production of persistent calcium sparklet activity. FASEB Journal, 2009, 23, 1000.19.	0.5	0
106	AKAP150 is required for NFATc3â€induced vascular BKCa channel suppression during diabetic hypertension. FASEB Journal, 2012, 26, 872.26.	0.5	0
107	AKAP150â€dependent changes in K v channel expression in ventricular myocytes following myocardial infarction. FASEB Journal, 2012, 26, 1053.9.	0.5	0
108	Heart Failure: The Final Frontier for Biophysics in Cardiovascular Medicine?. Biological and Medical Physics Series, 2013, , 175-181.	0.4	0

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109	Disruption of TRPV4 Ca 2+ signaling at myoendothelial projections (MEPs) contributes to endothelial dysfunction in Ang II hypertension. FASEB Journal, 2013, 27, 876.7.	0.5	0
110	TRPV4 Ca 2+ sparklets in myoendothelial projections (MEPs) regulate vascular function. FASEB Journal, 2013, 27, 916.5.	0.5	0
111	Local control of TRPV4 channels by AKAP150-targeted PKC in arterial smooth muscle. Journal of Cell Biology, 2014, 205, 2053OIA89.	5.2	0
112	Anchored G_sâ€coupled purinergic receptor regulation of Lâ€type Ca_V1.2 and vascular tone in diabetic hyperglycemia. FASEB Journal, 2018, 32, 569.10.	0.5	0
113	Hyperglycemiaâ€Induced Alteration of Brain Microvascular Endothelial Intracellular Ca Response to Ischemic Factors: Role of TRPV4 Channels. FASEB Journal, 2018, 32, lb445.	0.5	0
114	Local regulation of Lâ€type Ca_V1.2 channel and vascular reactivity by adenylyl cyclase 5 during diabetic hyperglycemia. FASEB Journal, 2018, 32, 567.1.	0.5	0
115	Piezo1 Tunes Blood Flow in the Central Nervous System. Circulation Research, 2022, 130, 1547-1549.	4.5	0