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	The physiological sensor channels TRP and piezo: Nobel Prize in Physiology or Medicine 2021. Physiological Reviews, 2022, 102, 1153-1158.	28.8	15
2	Mechanisms and physiological implications of cooperative gating of clustered ion channels. Physiological Reviews, 2022, 102, 1159-1210.	28.8	44
3	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
4	Piezo1 Tunes Blood Flow in the Central Nervous System. Circulation Research, 2022, 130, 1547-1549.	4.5	0
5	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
6	The Organization of the Sinoatrial Node Microvasculature Varies Regionally to Match Local Myocyte Excitability. Function, 2021, 2, zqab031.	2.3	24
7	Genetically engineered mice for combinatorial cardiovascular optobiology. ELife, 2021, 10, .	6.0	9
8	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
9	AKAP5 complex facilitates purinergic modulation of vascular L-type Ca2+ channel CaV1.2. Nature Communications, 2020, 11, 5303.	12.8	22
10	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
11	Evolving Discovery of the Origin of the Heartbeat. JACC: Clinical Electrophysiology, 2020, 6, 932-934.	3.2	23
12	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
13	TRPML1ng on sparks. Science Signaling, 2020, 13, .	3.6	1
14	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
15	Junctional sarcoplasmic reticulum motility in adult mouse ventricular myocytes. American Journal of Physiology - Cell Physiology, 2020, 318, C598-C604.	4.6	14
16	A stochastic model of ion channel cluster formation in the plasma membrane. Journal of General Physiology, 2019, 151, 1116-1134.	1.9	34
17	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
18	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

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19	Adenylyl cyclase 5â€“generated cAMP controls cerebral vascular reactivity during diabetic hyperglycemia. Journal of Clinical Investigation, 2019, 129, 3140-3152.	8.2	35
20	A Gs-coupled purinergic receptor boosts Ca2+ influx and vascular contractility during diabetic hyperglycemia. ELife, 2019, 8, .	6.0	33
21	A toolbox of nanobodies developed and validated for use as intrabodies and nanoscale immunolabels in mammalian brain neurons. ELife, 2019, 8, .	6.0	39
22	Kv2.1 mediates spatial and functional coupling of L-type calcium channels and ryanodine receptors in mammalian neurons. ELife, 2019, 8, .	6.0	63
23	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
24	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
25	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
26	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
27	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
28	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
29	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
30	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
31	Impaired BKCa channel function in native vascular smooth muscle from humans with type 2 diabetes. Scientific Reports, 2017, 7, 14058.	3.3	31
32	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
33	Proximal clustering between BK and CaV1.3 channels promotes functional coupling and BK channel activation at low voltage. ELife, 2017, 6, .	6.0	48
34	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
35	Oxidative stress decreases microtubule growth and stability in ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2016, 93, 32-43.	1.9	47
36	Ca2+ entry into neurons is facilitated by cooperative gating of clustered CaV1.3 channels. ELife, 2016, 5, .	6.0	61

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37	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
38	Graded Ca2+/calmodulin-dependent coupling of voltage-gated CaV1.2 channels. ELife, 2015, 4, .	6.0	97
39	A mitotic kinase scaffold depleted in testicular seminomas impacts spindle orientation in germ line stem cells. ELife, 2015, 4, e09384.	6.0	44
40	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
41	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
42	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
43	Local control of TRPV4 channels by AKAP150-targeted PKC in arterial smooth muscle. Journal of General Physiology, 2014, 143, 559-575.	1.9	86
44	Dystrophin-deficient cardiomyocytes derived from human urine: New biologic reagents for drug discovery. Stem Cell Research, 2014, 12, 467-480.	0.7	116
45	Cellular mechanisms of ventricular arrhythmias in a mouse model of Timothy syndrome (long QT) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.9	26
46	Local control of TRPV4 channels by AKAP150-targeted PKC in arterial smooth muscle. Journal of Cell Biology, 2014, 205, 2053OIA89.	5.2	0
47	CaV1.2 sparklets in heart and vascular smooth muscle. Journal of Molecular and Cellular Cardiology, 2013, 58, 67-76.	1.9	51
48	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
49	A Ca2+- and PKC-driven regulatory network in airway smooth muscle. Journal of General Physiology, 2013, 141, 161-164.	1.9	10
50	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
51	Heart Failure: The Final Frontier for Biophysics in Cardiovascular Medicine?. Biological and Medical Physics Series, 2013, , 175-181.	0.4	0
52	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
53	TRPV4 Ca 2+ sparklets in myoendothelial projections (MEPs) regulate vascular function. FASEB Journal, 2013, 27, 916.5.	0.5	0
54	Anchored phosphatases modulate glucose homeostasis. EMBO Journal, 2012, 31, 3991-4004.	7.8	69

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55	Anchored phosphatases modulate glucose homeostasis. EMBO Journal, 2012, 31, 4481-4481.	7.8	0
56	Adding Accessories for Hypertension. Hypertension, 2012, 60, 894-895.	2.7	0
57	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
58	L-Type Ca2+ Channel Function During Timothy Syndrome. Trends in Cardiovascular Medicine, 2012, 22, 72-76.	4.9	23
59	Ca2+ Signaling Amplification by Oligomerization of L-Type Cav1.2 Channels. Biophysical Journal, 2012, 102, 433a.	0.5	1
60	Cardiomyocyte-Specific Expression of Lamin A Improves Cardiac Function in Lmnaâˆ'/âˆ' Mice. PLoS ONE, 2012, 7, e42918.	2.5	23
61	AKAP150 is required for NFATc3â€induced vascular BKCa channel suppression during diabetic hypertension. FASEB Journal, 2012, 26, 872.26.	0.5	0
62	AKAP150â€dependent changes in K v channel expression in ventricular myocytes following myocardial infarction. FASEB Journal, 2012, 26, 1053.9.	0.5	0
63	Mitochondrial Targeted Antioxidant Peptide Ameliorates Hypertensive Cardiomyopathy. Journal of the American College of Cardiology, 2011, 58, 73-82.	2.8	314
64	Single Cell Transcriptional Profiling of Adult Mouse Cardiomyocytes. Journal of Visualized Experiments, 2011, , e3302.	0.3	13
65	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
66	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
67	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
68	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
69	Dynamic Changes in Sarcoplasmic Reticulum Structure in Ventricular Myocytes. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-14.	3.0	26
70	A-Kinase Anchoring Proteins. Circulation, 2010, 121, 1264-1271.	1.6	72
71	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
72	Eosinophil Cysteinyl Leukotriene Synthesis Mediated by Exogenous Secreted Phospholipase A2 Group X. Journal of Biological Chemistry, 2010, 285, 41491-41500.	3.4	50

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73	Natural inequalities: why some L-type Ca2+ channels work harder than others. Journal of General Physiology, 2010, 136, 143-147.	1.9	13
74	Increased Coupled Gating of L-Type Ca ²⁺ Channels During Hypertension and Timothy Syndrome. Circulation Research, 2010, 106, 748-756.	4.5	134
75	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
76	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
77	Phosphodiesterase 8A (PDE8A) regulates excitationâ€“contraction coupling in ventricular myocytes. Journal of Molecular and Cellular Cardiology, 2010, 49, 330-333.	1.9	74
78	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
79	The role of TRPV4 in rat parenchymal arterioles. FASEB Journal, 2010, 24, .	0.5	1
80	Myostatin represses physiological hypertrophy of the heart and excitationâ€“contraction coupling. Journal of Physiology, 2009, 587, 4873-4886.	2.9	58
81	Overexpression of Catalase Targeted to Mitochondria Attenuates Murine Cardiac Aging. Circulation, 2009, 119, 2789-2797.	1.6	414
82	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
83	Molecular and biophysical mechanisms of Ca2+ sparklets in smooth muscle. Journal of Molecular and Cellular Cardiology, 2009, 47, 436-444.	1.9	36
84	Local Control of Excitation-Contraction Coupling in Human Embryonic Stem Cell-Derived Cardiomyocytes. PLoS ONE, 2009, 4, e5407.	2.5	69
85	Roles of câ€Src and PKC in production of persistent calcium sparklet activity. FASEB Journal, 2009, 23, 1000.19.	0.5	0
86	CALCIUM SPARKLETS IN ARTERIAL SMOOTH MUSCLE. Clinical and Experimental Pharmacology and Physiology, 2008, 35, 1121-1126.	1.9	32
87	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
88	AKAP150 Is Required for Stuttering Persistent Ca ²⁺ Sparklets and Angiotensin IIâ€“Induced Hypertension. Circulation Research, 2008, 102, e1-e11.	4.5	120
89	NFAT-Dependent Excitationâ€“Transcription Coupling in Heart. Circulation Research, 2008, 103, 681-683.	4.5	23
90	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

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91	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
92	Calcium sparklets regulate local and global calcium in murine arterial smooth muscle. Journal of Physiology, 2007, 579, 187-201.	2.9	85
93	SMAKing Ca²⁺ sparks in arterial myocytes. Journal of Physiology, 2007, 584, 1-1.	2.9	0
94	Mechanisms underlying variations in excitation-contraction coupling across the mouse left ventricular free wall. Journal of Physiology, 2006, 572, 227-241.	2.9	48
95	Kv2 channels oppose myogenic constriction of rat cerebral arteries. American Journal of Physiology - Cell Physiology, 2006, 291, C348-C356.	4.6	83
96	On the Loose: Uncaging Ca2+-induced Ca2+ Release in Smooth Muscle. Journal of General Physiology, 2006, 127, 221-223.	1.9	3
97	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
98	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
99	Mechanisms Underlying Heterogeneous Ca2+ Sparklet Activity in Arterial Smooth Muscle. Journal of General Physiology, 2006, 127, 611-622.	1.9	108
100	Alterations in Early Action Potential Repolarization Causes Localized Failure of Sarcoplasmic Reticulum Ca 2+ Release. Circulation Research, 2005, 96, 543-550.	4.5	81
101	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
102	Sodium Current and Arrhythmogenesis in Heart Failure. Heart Failure Clinics, 2005, 1, 193-205.	2.1	6
103	NFATc3-Induced Reductions in Voltage-Gated K + Currents After Myocardial Infarction. Circulation Research, 2004, 94, 1340-1350.	4.5	90
104	NFATc3 Regulates Kv2.1 Expression in Arterial Smooth Muscle. Journal of Biological Chemistry, 2004, 279, 47326-47334.	3.4	92
105	Downregulation of the BK Channel Î²1 Subunit in Genetic Hypertension. Circulation Research, 2003, 93, 965-971.	4.5	179
106	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
107	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
108	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

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109	Functional coupling of calcineurin and protein kinase A in mouse ventricular myocytes. Journal of Physiology, 2002, 544, 57-69.	2.9	92
110	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
111	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
112	Ca2+ Flux Through Promiscuous Cardiac Na+ Channels: Slip-Mode Conductance. Science, 1998, 279, 1027-1033.	12.6	164
113	Defective Excitation-Contraction Coupling in Experimental Cardiac Hypertrophy and Heart Failure. Science, 1997, 276, 800-806.	12.6	715
114	Calcium Sparks and Excitation-Contraction Coupling in Phospholamban-Deficient Mouse Ventricular Myocytes. Journal of Physiology, 1997, 503, 21-29.	2.9	129
115	Two mechanisms of quantized calcium release in skeletal muscle. Nature, 1996, 379, 455-458.	27.8	310