Richard S Lewis

List of Publications by Year in Descending Order

55 papers	14,366 citations	38 h-index	60 g-index
60 ext. papers	15,497 ext. citations	17.1 avg, IF	6.84 L-index

#	Paper	IF	Citations
55	Cav1 regulates T cell expansion and apoptosis independently of voltage-gated Ca channel function.. *Nature Communications*, **2022**, 13, 2033	17.4	2
54	Conformational dynamics of auto-inhibition in the ER calcium sensor STIM1. *ELife*, **2021**, 10,	8.9	4
53	Store-Operated Calcium Channels: From Function to Structure and Back Again. *Cold Spring Harbor Perspectives in Biology*, **2020**, 12,	10.2	43
52	Structural features of STIM and Orai underlying store-operated calcium entry. *Current Opinion in Cell Biology*, **2019**, 57, 90-98	9	25
51	Numbers count: How STIM and Orai stoichiometry affect store-operated calcium entry. *Cell Calcium* , **2019**, 79, 35-43	4	29
50	Physiological CRAC channel activation and pore properties require STIM1 binding to all six Orai1 subunits. *Journal of General Physiology*, **2018**, 150, 1373-1385	3.4	25
49	Functional Analysis of Orai1 Concatemers Supports a Hexameric Stoichiometry for the CRAC Channel. *Biophysical Journal*, **2016**, 111, 1897-1907	2.9	60
48	Orai1 pore residues control CRAC channel inactivation independently of calmodulin. *Journal of General Physiology*, **2016**, 147, 137-52	3.4	36
47	The inactivation domain of STIM1 is functionally coupled with the Orai1 pore to enable Ca2+-dependent inactivation. *Journal of General Physiology*, **2016**, 147, 153-64	3.4	37
46	Calcium influx through CRAC channels controls actin organization and dynamics at the immune synapse. *ELife*, **2016**, 5,	8.9	46
45	Orai1 pore residues control CRAC channel inactivation independently of calmodulin. *Journal of Cell Biology*, **2016**, 212, 2124OIA24	7.3	
44	The inactivation domain of STIM1 is functionally coupled with the Orai1 pore to enable Ca2+-dependent inactivation. *Journal of Cell Biology*, **2016**, 212, 2124OIA25	7.3	
43	Alternative splicing converts STIM2 from an activator to an inhibitor of store-operated calcium channels. *Journal of Cell Biology*, **2015**, 209, 653-69	7.3	73
42	Store-Operated Calcium Channels. *Physiological Reviews*, **2015**, 95, 1383-436	47.9	684
41	Alternative splicing converts STIM2 from an activator to an inhibitor of store-operated calcium channels. *Journal of General Physiology*, **2015**, 146, 1461OIA35	3.4	
40	Single-molecule analysis of diffusion and trapping of STIM1 and Orai1 at endoplasmic reticulum-plasma membrane junctions. *Molecular Biology of the Cell*, **2014**, 25, 3672-85	3.5	75
39	Store-operated calcium channels: new perspectives on mechanism and function. *Cold Spring Harbor Perspectives in Biology*, **2011**, 3,	10.2	150

38	Stoichiometric requirements for trapping and gating of Ca2+ release-activated Ca2+ (CRAC) channels by stromal interaction molecule 1 (STIM1). *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 13299-304	11.5	133
37	Essential role for the CRAC activation domain in store-dependent oligomerization of STIM1. *Molecular Biology of the Cell*, **2010**, 21, 1897-907	3.5	151
36	Molecular basis of calcium signaling in lymphocytes: STIM and ORAI. *Annual Review of Immunology*, **2010**, 28, 491-533	34.7	600
35	STIM1 and calmodulin interact with Orai1 to induce Ca2+-dependent inactivation of CRAC channels. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 15495-500	11.5	193
34	Differential contribution of chemotaxis and substrate restriction to segregation of immature and mature thymocytes. *Immunity*, **2009**, 31, 986-98	32.3	84
33	STIM1 clusters and activates CRAC channels via direct binding of a cytosolic domain to Orai1. *Cell*, **2009**, 136, 876-90	56.2	737
32	Oligomerization of STIM1 couples ER calcium depletion to CRAC channel activation. *Nature*, **2008**, 454, 538-42	50.4	434
31	The molecular choreography of a store-operated calcium channel. *Nature*, **2007**, 446, 284-7	50.4	417
30	Some assembly required: constructing the elementary units of store-operated Ca2+ entry. *Cell Calcium*, **2007**, 42, 163-72	4	70
29	New insights into the molecular mechanisms of store-operated Ca2+ signaling in T cells. *Trends in Molecular Medicine*, **2007**, 13, 103-7	11.5	53
28	The elementary unit of store-operated Ca2+ entry: local activation of CRAC channels by STIM1 at ER-plasma membrane junctions. *Journal of Cell Biology*, **2006**, 174, 815-25	7.3	530
27	Ca2+ store depletion causes STIM1 to accumulate in ER regions closely associated with the plasma membrane. *Journal of Cell Biology*, **2006**, 174, 803-13	7.3	644
26	Regulation of CRAC channel activity by recruitment of silent channels to a high open-probability gating mode. *Journal of General Physiology*, **2006**, 128, 373-86	3.4	119
25	A mutation in Orai1 causes immune deficiency by abrogating CRAC channel function. *Nature*, **2006**, 441, 179-85	50.4	1781
24	Real-time measurement of signaling and motility during T cell development in the thymus. *Seminars in Immunology*, **2005**, 17, 411-20	10.7	23
23	Calcium oscillations regulate thymocyte motility during positive selection in the three-dimensional thymic environment. *Nature Immunology*, **2005**, 6, 143-51	19.1	197
22	A severe defect in CRAC Ca2+ channel activation and altered K+ channel gating in T cells from immunodeficient patients. *Journal of Experimental Medicine*, **2005**, 202, 651-62	16.6	195
21	Modulation of plasma membrane calcium-ATPase activity by local calcium microdomains near CRAC channels in human T cells. *Journal of Physiology*, **2004**, 556, 805-17	3.9	77

20	Store-operated calcium channels: properties, functions and the search for a molecular mechanism. *Advances in Molecular and Cell Biology*, **2004**, 32, 121-140		6
19	CRAC channels: activation, permeation, and the search for a molecular identity. *Cell Calcium*, **2003**, 33, 311-21	4	142
18	Enhancement of calcium signalling dynamics and stability by delayed modulation of the plasma-membrane calcium-ATPase in human T cells. *Journal of Physiology*, **2002**, 541, 877-94	3.9	103
17	Separation and characterization of currents through store-operated CRAC channels and Mg2+-inhibited cation (MIC) channels. *Journal of General Physiology*, **2002**, 119, 487-507	3.4	249
16	Dynamics of thymocyte-stromal cell interactions visualized by two-photon microscopy. *Science*, **2002**, 296, 1876-80	33.3	244
15	Potentiation and inhibition of Ca(2+) release-activated Ca(2+) channels by 2-aminoethyldiphenyl borate (2-APB) occurs independently of IP(3) receptors. *Journal of Physiology*, **2001**, 536, 3-19	3.9	418
14	Calcium signaling mechanisms in T lymphocytes. *Annual Review of Immunology*, **2001**, 19, 497-521	34.7	697
13	Store-operated calcium channels. *Advances in Second Messenger and Phosphoprotein Research*, **1999**, 33, 279-307		75
12	Simultaneous Measurement of Membrane Current and Intracellular Calcium **1999**, 140-163		
11	Calcium oscillations increase the efficiency and specificity of gene expression. *Nature*, **1998**, 392, 933-6	50.4	1649
10	A fluorometric method for estimating the calcium content of internal stores. *Cell Calcium*, **1998**, 23, 251-9	4	23
9	Quantitative and qualitative control of antigen receptor signalling in tolerant B lymphocytes. *Novartis Foundation Symposium*, **1998**, 215, 137-44; discussion 144-5, 186-90		17
8	Mitochondrial regulation of store-operated calcium signaling in T lymphocytes. *Journal of Cell Biology*, **1997**, 137, 633-48	7.3	450
7	Different nuclear signals are activated by the B cell receptor during positive versus negative signaling. *Immunity*, **1997**, 6, 419-28	32.3	334
6	Differential activation of transcription factors induced by Ca2+ response amplitude and duration. *Nature*, **1997**, 386, 855-8	50.4	1552
5	Differential activation of transcription factors induced by Ca2+ response amplitude and duration. *Nature*, **1997**, 388, 308-308	50.4	6
4	Slow calcium-dependent inactivation of depletion-activated calcium current. Store-dependent and -independent mechanisms. *Journal of Biological Chemistry*, **1995**, 270, 14445-51	5.4	198
3	Isolation of mutant T lymphocytes with defects in capacitative calcium entry. *Immunity*, **1995**, 3, 239-50	32.3	62

2	Potassium and calcium channels in lymphocytes. *Annual Review of Immunology*, **1995**, 13, 623-53	34.7	413
1	Conformational dynamics of auto-inhibition in the ER calcium sensor STIM1		1