

Steven S An

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

4,090
citations

34
h-index

63
g-index

104
ext. papers

4,907
ext. citations

9.1
avg, IF

5.01
L-index

#	Paper	IF	Citations
81	Universal physical responses to stretch in the living cell. <i>Nature</i> , 2007 , 447, 592-5	50.4	537
80	Bitter taste receptors on airway smooth muscle bronchodilate by localized calcium signaling and reverse obstruction. <i>Nature Medicine</i> , 2010 , 16, 1299-304	50.5	436
79	Airway smooth muscle dynamics: a common pathway of airway obstruction in asthma. <i>European Respiratory Journal</i> , 2007 , 29, 834-60	13.6	299
78	Resveratrol prevents high fat/sucrose diet-induced central arterial wall inflammation and stiffening in nonhuman primates. <i>Cell Metabolism</i> , 2014 , 20, 183-90	24.6	163
77	Stiffness changes in cultured airway smooth muscle cells. <i>American Journal of Physiology - Cell Physiology</i> , 2002 , 283, C792-801	5.4	137
76	Directed migration of cancer cells guided by the graded texture of the underlying matrix. <i>Nature Materials</i> , 2016 , 15, 792-801	27	120
75	Regulation of brain tumor dispersal by NKCC1 through a novel role in focal adhesion regulation. <i>PLoS Biology</i> , 2012 , 10, e1001320	9.7	105
74	Do biophysical properties of the airway smooth muscle in culture predict airway hyperresponsiveness?. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2006 , 35, 55-64	5.7	103
73	Spatial control of adult stem cell fate using nanotopographic cues. <i>Biomaterials</i> , 2014 , 35, 2401-2410	15.6	100
72	Glycolysis is the primary bioenergetic pathway for cell motility and cytoskeletal remodeling in human prostate and breast cancer cells. <i>Oncotarget</i> , 2015 , 6, 130-43	3.3	99
71	Cytoskeleton dynamics: fluctuations within the network. <i>Biochemical and Biophysical Research Communications</i> , 2007 , 355, 324-30	3.4	81
70	Role of heat shock protein 27 in cytoskeletal remodeling of the airway smooth muscle cell. <i>Journal of Applied Physiology</i> , 2004 , 96, 1701-13	3.7	78
69	The GPCR OGR1 (GPR68) mediates diverse signalling and contraction of airway smooth muscle in response to small reductions in extracellular pH. <i>British Journal of Pharmacology</i> , 2012 , 166, 981-90	8.6	75
68	TWIST1-WDR5- Regulates Chromatin to Facilitate Prostate Cancer Metastasis. <i>Cancer Research</i> , 2017 , 77, 3181-3193	10.1	68
67	TAS2R activation promotes airway smooth muscle relaxation despite β_2 -adrenergic receptor tachyphylaxis. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2012 , 303, L304-11	5.8	68
66	Rat airway smooth muscle cell during actin modulation: rheology and glassy dynamics. <i>American Journal of Physiology - Cell Physiology</i> , 2005 , 289, C1388-95	5.4	66
65	Defining an olfactory receptor function in airway smooth muscle cells. <i>Scientific Reports</i> , 2016 , 6, 38231	4.9	60

64	Bitter taste receptor function in asthmatic and nonasthmatic human airway smooth muscle cells. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2014 , 50, 678-83	5.7	59
63	LAMC2 enhances the metastatic potential of lung adenocarcinoma. <i>Cell Death and Differentiation</i> , 2015 , 22, 1341-52	12.7	59
62	Hypoxia alters biophysical properties of endothelial cells via p38 MAPK- and Rho kinase-dependent pathways. <i>American Journal of Physiology - Cell Physiology</i> , 2005 , 289, C521-30	5.4	59
61	β-Agonist-mediated relaxation of airway smooth muscle is protein kinase A-dependent. <i>Journal of Biological Chemistry</i> , 2014 , 289, 23065-23074	5.4	54
60	Increased tissue transglutaminase activity contributes to central vascular stiffness in eNOS knockout mice. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2013 , 305, H803-10	5.2	54
59	Human lung parenchyma but not proximal bronchi produces fibroblasts with enhanced TGF-beta signaling and alpha-SMA expression. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2010 , 43, 641-51	5.7	51
58	TGF-β1 Evokes Human Airway Smooth Muscle Cell Shortening and Hyperresponsiveness via Smad3. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2018 , 58, 575-584	5.7	49
57	Acquisition of paclitaxel resistance is associated with a more aggressive and invasive phenotype in prostate cancer. <i>Journal of Cellular Biochemistry</i> , 2013 , 114, 1286-93	4.7	49
56	The twist box domain is required for Twist1-induced prostate cancer metastasis. <i>Molecular Cancer Research</i> , 2013 , 11, 1387-400	6.6	48
55	Taste and smell GPCRs in the lung: Evidence for a previously unrecognized widespread chemosensory system. <i>Cellular Signalling</i> , 2018 , 41, 82-88	4.9	47
54	Cell stiffness, contractile stress and the role of extracellular matrix. <i>Biochemical and Biophysical Research Communications</i> , 2009 , 382, 697-703	3.4	44
53	Common polygenic variation and risk for childhood-onset schizophrenia. <i>Molecular Psychiatry</i> , 2016 , 21, 94-6	15.1	41
52	Interdicting Gq Activation in Airway Disease by Receptor-Dependent and Receptor-Independent Mechanisms. <i>Molecular Pharmacology</i> , 2016 , 89, 94-104	4.3	39
51	Tissue Transglutaminase Modulates Vascular Stiffness and Function Through Crosslinking-Dependent and Crosslinking-Independent Functions. <i>Journal of the American Heart Association</i> , 2017 , 6,	6	38
50	H2S relaxes isolated human airway smooth muscle cells via the sarcolemmal K(ATP) channel. <i>Biochemical and Biophysical Research Communications</i> , 2014 , 446, 393-8	3.4	37
49	Cigarette smoke disrupts monolayer integrity by altering epithelial cell-cell adhesion and cortical tension. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2017 , 313, L581-L591	5.8	36
48	Bronchodilator activity of bitter tastants in human tissue. <i>Nature Medicine</i> , 2011 , 17, 776-8	50.5	35
47	Pleiotropic Effects of Bitter Taste Receptors on [Ca ²⁺] _i Mobilization, Hyperpolarization, and Relaxation of Human Airway Smooth Muscle Cells. <i>PLoS ONE</i> , 2015 , 10, e0131582	3.7	34

46	Coupling of Airway Smooth Muscle Bitter Taste Receptors to Intracellular Signaling and Relaxation Is via G. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2017 , 56, 762-771	5.7	32
45	An inflammation-independent contraction mechanophenotype of airway smooth muscle in asthma. <i>Journal of Allergy and Clinical Immunology</i> , 2016 , 138, 294-297.e4	11.5	31
44	Asporin Restricts Mesenchymal Stromal Cell Differentiation, Alters the Tumor Microenvironment, and Drives Metastatic Progression. <i>Cancer Research</i> , 2019 , 79, 3636-3650	10.1	27
43	Opsin 3 and 4 mediate light-induced pulmonary vasorelaxation that is potentiated by G protein-coupled receptor kinase 2 inhibition. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2018 , 314, L93-L106	5.8	25
42	Reply to: Activation of BK channels may not be required for bitter tastant-induced bronchodilation. <i>Nature Medicine</i> , 2012 , 18, 650-1	50.5	25
41	Rottlerin causes pulmonary edema in vivo: a possible role for PKCdelta. <i>Journal of Applied Physiology</i> , 2007 , 103, 2084-94	3.7	25
40	AIM1 is an actin-binding protein that suppresses cell migration and micrometastatic dissemination. <i>Nature Communications</i> , 2017 , 8, 142	17.4	24
39	Desmin Phosphorylation Triggers Preamyloid Oligomers Formation and Myocyte Dysfunction in Acquired Heart Failure. <i>Circulation Research</i> , 2018 , 122, e75-e83	15.7	23
38	TGF β reinforces arterial aging in the vascular smooth muscle cell through a long-range regulation of the cytoskeletal stiffness. <i>Scientific Reports</i> , 2018 , 8, 2668	4.9	22
37	Mechanical signals and mechanosensitive modulation of intracellular [Ca(2+)] in smooth muscle. <i>American Journal of Physiology - Cell Physiology</i> , 2000 , 279, C1375-84	5.4	22
36	A novel small molecule target in human airway smooth muscle for potential treatment of obstructive lung diseases: a staged high-throughput biophysical screening. <i>Respiratory Research</i> , 2011 , 12, 8	7.3	21
35	Biophysical basis for airway hyperresponsiveness. <i>Canadian Journal of Physiology and Pharmacology</i> , 2007 , 85, 700-14	2.4	21
34	Biased signaling of the proton-sensing receptor OGR1 by benzodiazepines. <i>FASEB Journal</i> , 2018 , 32, 862-874	0.9	20
33	Senescent stromal cells induce cancer cell migration via inhibition of RhoA/ROCK/myosin-based cell contractility. <i>Oncotarget</i> , 2015 , 6, 30516-31	3.3	20
32	Germline Variants in Asporin Vary by Race, Modulate the Tumor Microenvironment, and Are Differentially Associated with Metastatic Prostate Cancer. <i>Clinical Cancer Research</i> , 2016 , 22, 448-58	12.9	19
31	Androgen-Regulated SPARCL1 in the Tumor Microenvironment Inhibits Metastatic Progression. <i>Cancer Research</i> , 2015 , 75, 4322-34	10.1	19
30	G β facilitates shortening in human airway smooth muscle by modulating phosphoinositide 3-kinase-mediated activation in a RhoA-dependent manner. <i>British Journal of Pharmacology</i> , 2017 , 174, 4383-4395	8.6	19
29	Mechanical stress determines the configuration of TGF β activation in articular cartilage. <i>Nature Communications</i> , 2021 , 12, 1706	17.4	18

28	A microphysiological model of the bronchial airways reveals the interplay of mechanical and biochemical signals in bronchospasm. <i>Nature Biomedical Engineering</i> , 2019 , 3, 532-544	19	17
27	COX-2 dependent regulation of mechanotransduction in human breast cancer cells. <i>Cancer Biology and Therapy</i> , 2015 , 16, 430-7	4.6	17
26	YAP and TAZ regulate cell volume. <i>Journal of Cell Biology</i> , 2019 , 218, 3472-3488	7.3	16
25	β -Adrenergic Receptors Chaperone Trapped Bitter Taste Receptor 14 to the Cell Surface as a Heterodimer and Exert Unidirectional Desensitization of Taste Receptor Function. <i>Journal of Biological Chemistry</i> , 2016 , 291, 17616-28	5.4	16
24	Structure-function studies of the bHLH phosphorylation domain of TWIST1 in prostate cancer cells. <i>Neoplasia</i> , 2015 , 17, 16-31	6.4	16
23	Impaired Relaxation of Airway Smooth Muscle in Mice Lacking the Actin-Binding Protein Gelsolin. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2017 , 56, 628-636	5.7	14
22	Lysyl oxidase-like 2 depletion is protective in age-associated vascular stiffening. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019 , 317, H49-H59	5.2	14
21	Transforming Growth Factor- β Decreases β Agonist-induced Relaxation in Human Airway Smooth Muscle. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2019 , 61, 209-218	5.7	14
20	A nonapoptotic endothelial barrier-protective role for caspase-3. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2019 , 316, L1118-L1126	5.8	13
19	PGC1/PPAR drive cardiomyocyte maturation at single cell level via YAP1 and SF3B2. <i>Nature Communications</i> , 2021 , 12, 1648	17.4	13
18	Airway smooth muscle proliferation and mechanics: effects of AMP kinase agonists. <i>MCB Molecular and Cellular Biomechanics</i> , 2007 , 4, 143-57	1.2	12
17	Mechanical strain modulates maximal phosphatidylinositol turnover in airway smooth muscle. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 1999 , 277, L968-74	5.8	10
16	Biomechanical interplay between anisotropic re-organization of cells and the surrounding matrix underlies transition to invasive cancer spread. <i>Scientific Reports</i> , 2018 , 8, 14210	4.9	10
15	Deletion of the microRNA-degrading nuclease, translin/trax, prevents pathogenic vascular stiffness. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019 , 317, H1116-H1124	5.2	8
14	Role of differentially expressed microRNA-139-5p in the regulation of phenotypic internal anal sphincter smooth muscle tone. <i>Scientific Reports</i> , 2017 , 7, 1477	4.9	7
13	Targeted transgenesis identifies G β as the bottleneck in β -adrenergic receptor cell signaling and physiological function in airway smooth muscle. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2014 , 307, L775-80	5.8	6
12	Role of Isocitrate Dehydrogenase 2 on DNA Hydroxymethylation in Human Airway Smooth Muscle Cells. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2020 , 63, 36-45	5.7	5
11	Identification and characterization of an atypical G β -biased β AR agonist that fails to evoke airway smooth muscle cell tachyphylaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	4

10	PGC1/PPAR Drive Cardiomyocyte Maturation through Regulation of Yap1 and SF3B2		4
9	The odorant receptor OR2W3 on airway smooth muscle evokes bronchodilation via a cooperative chemosensory tradeoff between TMEM16A and CFTR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 28485-28495	11.5	4
8	FFAR1 activation attenuates histamine-induced myosin light chain phosphorylation and cortical tension development in human airway smooth muscle cells. <i>Respiratory Research</i> , 2020 , 21, 317	7.3	3
7	Degradation of Premature-miR-181b by the Translin/Trax RNase Increases Vascular Smooth Muscle Cell Stiffness. <i>Hypertension</i> , 2021 , 78, 831-839	8.5	1
6	Inhibition of ABCC1 Decreases cAMP Egress and Promotes Human Airway Smooth Muscle Cell Relaxation. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2021 ,	5.7	1
5	YAP/TAZ as a Novel Regulator of cell volume		1
4	Identification and Characterization of Novel Bronchodilator Agonists Acting at Human Airway Smooth Muscle Cell TAS2R5. <i>ACS Pharmacology and Translational Science</i> , 2020 , 3, 1069-1075	5.9	1
3	Cystic fibrosis transmembrane conductance regulator function, not TAS2R38 gene haplotypes, predict sinus surgery in children and young adults with cystic fibrosis. <i>International Forum of Allergy and Rhinology</i> , 2020 , 10, 748-754	6.3	0
2	Biophysical Basis of Airway Smooth Muscle Contraction and Hyperresponsiveness in Asthma1-30		
1	Selective Signal Capture from Multidimensional GPCR Outputs with Biased Agonists: Progress Towards Novel Drug Development. <i>Molecular Diagnosis and Therapy</i> ,	4.5	