Steven S Segal

List of Publications by Citations

135 papers	4,871 citations	40 h-index	67 g-index
163 ext. papers	5,261 ext. citations	4.2 avg, IF	5.93 L-index

#	Paper	IF	Citations
135	Regulation of blood flow in the microcirculation. *Microcirculation*, **2005**, 12, 33-45	2.9	361
134	Electrical coupling between endothelial cells and smooth muscle cells in hamster feed arteries: role in vasomotor control. *Circulation Research*, **2000**, 87, 474-9	15.7	250
133	Endothelial cell pathway for conduction of hyperpolarization and vasodilation along hamster feed artery. *Circulation Research*, **2000**, 86, 94-100	15.7	194
132	Neural control of muscle blood flow during exercise. *Journal of Applied Physiology*, **2004**, 97, 731-8	3.7	179
131	A macroporous hydrogel for the coculture of neural progenitor and endothelial cells to form functional vascular networks in vivo. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 2512-7	11.5	175
130	Propagated endothelial Ca2+ waves and arteriolar dilation in vivo: measurements in Cx40BAC GCaMP2 transgenic mice. *Circulation Research*, **2007**, 101, 1300-9	15.7	167
129	Intravenous hemostat: nanotechnology to halt bleeding. *Science Translational Medicine*, **2009**, 1, 11ra22	17.5	134
128	Endothelial and smooth muscle cell conduction in arterioles controlling blood flow. *American Journal of Physiology - Heart and Circulatory Physiology*, **1998**, 274, H178-86	5.2	122
127	Innate control of adaptive immunity via remodeling of lymph node feed arteriole. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 16315-20	11.5	120
126	Role for endothelial cell conduction in ascending vasodilatation and exercise hyperaemia in hamster skeletal muscle. *Journal of Physiology*, **2001**, 536, 937-46	3.9	113
125	Connexin expression and conducted vasodilation along arteriolar endothelium in mouse skeletal muscle. *Journal of Applied Physiology*, **2004**, 97, 1152-8	3.7	106
124	Expression of homocellular and heterocellular gap junctions in hamster arterioles and feed arteries. *Cardiovascular Research*, **2003**, 60, 643-53	9.9	93
123	Spread of vasodilatation and vasoconstriction along feed arteries and arterioles of hamster skeletal muscle. *Journal of Physiology*, **1999**, 516 (Pt 1), 283-91	3.9	92
122	Defining electrical communication in skeletal muscle resistance arteries: a computational approach. *Journal of Physiology*, **2005**, 568, 267-81	3.9	85
121	Interaction between sympathetic nerve activation and muscle fibre contraction in resistance vessels of hamster retractor muscle. *Journal of Physiology*, **2003**, 550, 563-74	3.9	84
120	Homocellular conduction along endothelium and smooth muscle of arterioles in hamster cheek pouch: unmasking an NO wave. *Circulation Research*, **2003**, 93, 61-8	15.7	83
119	Vasomotor control in arterioles of the mouse cremaster muscle. *FASEB Journal*, **2000**, 14, 197-207	0.9	80

118	Conduction of hyperpolarization along hamster feed arteries: augmentation by acetylcholine. *American Journal of Physiology - Heart and Circulatory Physiology*, **2002**, 283, H102-9	5.2	78
117	Arteriolar network architecture and vasomotor function with ageing in mouse gluteus maximus muscle. *Journal of Physiology*, **2004**, 561, 535-45	3.9	76
116	Electrical activation of endothelium evokes vasodilation and hyperpolarization along hamster feed arteries. *American Journal of Physiology - Heart and Circulatory Physiology*, **2001**, 280, H160-7	5.2	76
115	Codistribution of NOS and caveolin throughout peripheral vasculature and skeletal muscle of hamsters. *American Journal of Physiology - Heart and Circulatory Physiology*, **1999**, 277, H1167-77	5.2	70
114	Electromechanical and pharmacomechanical signalling pathways for conducted vasodilatation along endothelium of hamster feed arteries. *Journal of Physiology*, **2007**, 579, 175-86	3.9	69
113	Rapid dilation of arterioles with single contraction of hamster skeletal muscle. *American Journal of Physiology - Heart and Circulatory Physiology*, **2006**, 290, H119-27	5.2	69
112	Resolution of smooth muscle and endothelial pathways for conduction along hamster cheek pouch arterioles. *American Journal of Physiology - Heart and Circulatory Physiology*, **2000**, 278, H604-12	5.2	65
111	Aging impairs electrical conduction along endothelium of resistance arteries through enhanced Ca2+-activated K+ channel activation. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2013**, 33, 1892-901	8.4	58
110	Perivascular innervation: a multiplicity of roles in vasomotor control and myoendothelial signaling. *Microcirculation*, **2013**, 20, 217-38	2.9	58
109	Tuning electrical conduction along endothelial tubes of resistance arteries through Ca(2+)-activated K(+) channels. *Circulation Research*, **2012**, 110, 1311-21	15.7	56
108	Blunting of rapid onset vasodilatation and blood flow restriction in arterioles of exercising skeletal muscle with ageing in male mice. *Journal of Physiology*, **2010**, 588, 2269-82	3.9	56
107	Simulation of motor unit recruitment and microvascular unit perfusion: spatial considerations. *Journal of Applied Physiology*, **1997**, 83, 1223-34	3.7	56
106	Effect of motor unit recruitment on functional vasodilatation in hamster retractor muscle. *Journal of Physiology*, **2000**, 524 Pt 1, 267-78	3.9	53
105	Temporal events underlying arterial remodeling after chronic flow reduction in mice: correlation of structural changes with a deficit in basal nitric oxide synthesis. *Circulation Research*, **2000**, 86, 1160-6	15.7	53
104	Integration and Modulation of Intercellular Signaling Underlying Blood Flow Control. *Journal of Vascular Research*, **2015**, 52, 136-57	1.9	51
103	Interaction between conducted vasodilation and sympathetic nerve activation in arterioles of hamster striated muscle. *Circulation Research*, **1995**, 76, 885-91	15.7	51
102	Role of EDHF in conduction of vasodilation along hamster cheek pouch arterioles in vivo. *American Journal of Physiology - Heart and Circulatory Physiology*, **2000**, 278, H1832-9	5.2	47
101	Function and expression of ryanodine receptors and inositol 1,4,5-trisphosphate receptors in smooth muscle cells of murine feed arteries and arterioles. *Journal of Physiology*, **2012**, 590, 1849-69	3.9	46

100	Propagation of calcium waves along endothelium of hamster feed arteries. *American Journal of Physiology - Heart and Circulatory Physiology*, **2007**, 292, H1634-40	5.2	45
99	Electrical conduction along endothelial cell tubes from mouse feed arteries: confounding actions of glycyrrhetinic acid derivatives. *British Journal of Pharmacology*, **2012**, 166, 774-87	8.6	44
98	Connexin isoform expression in smooth muscle cells and endothelial cells of hamster cheek pouch arterioles and retractor feed arteries. *Microcirculation*, **2008**, 15, 503-14	2.9	44
97	Muscle length directs sympathetic nerve activity and vasomotor tone in resistance vessels of hamster retractor. *Circulation Research*, **1996**, 79, 551-9	15.7	44
96	Oxygen induces electromechanical coupling in arteriolar smooth muscle cells: a role for L-type Ca2+ channels. *American Journal of Physiology - Heart and Circulatory Physiology*, **1998**, 274, H2018-24	5.2	41
95	Electrophysiological basis of arteriolar vasomotion in vivo. *Journal of Vascular Research*, **2000**, 37, 568-75	1.9	40
94	Alignment of microvascular units along skeletal muscle fibers of hamster retractor. *Journal of Applied Physiology*, **1997**, 82, 42-8	3.7	39
93	Contribution of active membrane processes to conducted hyperpolarization in arterioles of hamster cheek pouch. *Microcirculation*, **2004**, 11, 425-33	2.9	37
92	Spreading the signal for vasodilatation: implications for skeletal muscle blood flow control and the effects of ageing. *Journal of Physiology*, **2012**, 590, 6277-84	3.9	36
91	VEGF-A and Semaphorin3A: modulators of vascular sympathetic innervation. *Developmental Biology* , **2009**, 334, 119-32	3.1	36
90	Regional heterogeneity of □adrenoreceptor subtypes in arteriolar networks of mouse skeletal muscle. *Journal of Physiology*, **2010**, 588, 4261-74	3.9	35
89	Sympathetic neural inhibition of conducted vasodilatation along hamster feed arteries: complementary effects of alpha1- and alpha2-adrenoreceptor activation. *Journal of Physiology*, **2005**, 563, 541-55	3.9	35
88	Regional activation of rapid onset vasodilatation in mouse skeletal muscle: regulation through □adrenoreceptors. *Journal of Physiology*, **2010**, 588, 3321-31	3.9	34
87	The mouse cremaster muscle preparation for intravital imaging of the microcirculation. *Journal of Visualized Experiments*, **2011**,	1.6	29
86	Aging alters reactivity of microvascular resistance networks in mouse gluteus maximus muscle. *American Journal of Physiology - Heart and Circulatory Physiology*, **2014**, 307, H830-9	5.2	28
85	Membrane potential governs calcium influx into microvascular endothelium: integral role for muscarinic receptor activation. *Journal of Physiology*, **2015**, 593, 4531-48	3.9	26
84	Advanced age protects microvascular endothelium from aberrant Ca(2+) influx and cell death induced by hydrogen peroxide. *Journal of Physiology*, **2015**, 593, 2155-69	3.9	26
83	Histamine inhibits conducted vasodilation through endothelium-derived NO production in arterioles of mouse skeletal muscle. *FASEB Journal*, **2004**, 18, 280-6	0.9	26

82	Advanced age decreases local calcium signaling in endothelium of mouse mesenteric arteries in vivo. *American Journal of Physiology - Heart and Circulatory Physiology*, **2016**, 310, H1091-6	5.2	26
81	Temperature effects on morphological integrity and Ca□+ signaling in freshly isolated murine feed artery endothelial cell tubes. *American Journal of Physiology - Heart and Circulatory Physiology*, **2011**, 301, H773-83	5.2	25
80	Arteriolar smooth muscle Ca2+ dynamics during blood flow control in hamster cheek pouch. *Journal of Applied Physiology*, **2006**, 101, 307-15	3.7	25
79	Neurovascular alignment in adult mouse skeletal muscles. *Microcirculation*, **2005**, 12, 161-7	2.9	24
78	Calcium and electrical dynamics in lymphatic endothelium. *Journal of Physiology*, **2017**, 595, 7347-7368	3.9	23
77	Coordination of intercellular Ca(2+) signaling in endothelial cell tubes of mouse resistance arteries. *Microcirculation*, **2012**, 19, 757-70	2.9	23
76	Heterogeneity of vascular innervation in hamster cheek pouch and retractor muscle. *Journal of Vascular Research*, **1999**, 36, 465-76	1.9	23
75	Microvascular architecture in rat soleus and extensor digitorum longus muscles. *Microvascular Research*, **1992**, 43, 192-204	3.7	23
74	Barium chloride injures myofibers through calcium-induced proteolysis with fragmentation of motor nerves and microvessels. *Skeletal Muscle*, **2019**, 9, 27	5.1	22
73	Microvessels promote motor nerve survival and regeneration through local VEGF release following ectopic reattachment. *Microcirculation*, **2004**, 11, 633-44	2.9	22
72	Sympathetic nerves inhibit conducted vasodilatation along feed arteries during passive stretch of hamster skeletal muscle. *Journal of Physiology*, **2003**, 552, 273-82	3.9	22
71	Attenuation of vasodilatation with skeletal muscle fatigue in hamster retractor. *Journal of Physiology*, **2000**, 524 Pt 3, 929-41	3.9	22
70	Calcium and electrical signalling along endothelium of the resistance vasculature. *Basic and Clinical Pharmacology and Toxicology*, **2012**, 110, 80-6	3.1	20
69	Quantifying perivascular sympathetic innervation: regional differences in male C57BL/6 mice at 3 and 20 months. *Journal of Neuroscience Methods*, **2009**, 184, 124-8	3	20
68	Independence of connexin expression and vasomotor conduction from sympathetic innervation in hamster feed arteries. *Microcirculation*, **2004**, 11, 397-408	2.9	20
67	Spatial relationships between neuromuscular junctions and microvessels in hamster cremaster muscle. *Microvascular Research*, **1994**, 48, 50-67	3.7	20
66	Arterial morphology and blood volumes of rats following 10-14 weeks of tail suspension. *Medicine and Science in Sports and Exercise*, **1997**, 29, 1304-10	1.2	20
65	Ageing alters perivascular nerve function of mouse mesenteric arteries in vivo. *Journal of Physiology*, **2013**, 591, 1251-63	3.9	19

64	Impact of Aging on Calcium Signaling and Membrane Potential in Endothelium of Resistance Arteries: A Role for Mitochondria. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2017**, 72, 1627-1637	6.4	18
63	Rapid versus slow ascending vasodilatation: intercellular conduction versus flow-mediated signalling with tetanic versus rhythmic muscle contractions. *Journal of Physiology*, **2017**, 595, 7149-7165	3.9	18
62	Depressed perivascular sensory innervation of mouse mesenteric arteries with advanced age. *Journal of Physiology*, **2016**, 594, 2323-38	3.9	18
61	Visualizing calcium responses to acetylcholine convection along endothelium of arteriolar networks in Cx40BAC-GCaMP2 transgenic mice. *American Journal of Physiology - Heart and Circulatory Physiology*, **2011**, 301, H794-802	5.2	17
60	1-integrin is essential for vasoregulation and smooth muscle survival in vivo. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2013**, 33, 2325-35	9.4	15
59	Dantrolene suppresses spontaneous Ca2+ release without altering excitation-contraction coupling in cardiomyocytes of aged mice. *American Journal of Physiology - Heart and Circulatory Physiology*, **2014**, 307, H818-29	5.2	14
58	Isolation of microvascular endothelial tubes from mouse resistance arteries. *Journal of Visualized Experiments*, **2013**, e50759	1.6	14
57	Aging increases capacitance and spontaneous transient outward current amplitude of smooth muscle cells from murine superior epigastric arteries. *American Journal of Physiology - Heart and Circulatory Physiology*, **2014**, 306, H1512-24	5.2	13
56	Intravital macrozoom imaging and automated analysis of endothelial cell calcium signals coincident with arteriolar dilation in Cx40(BAC) -GCaMP2 transgenic mice. *Microcirculation*, **2011**, 18, 331-8	2.9	13
55	Evidence for impaired neurovascular transmission in a murine model of Duchenne muscular dystrophy. *Journal of Applied Physiology*, **2011**, 110, 601-9	3.7	13
54	Ischemia-reperfusion impairs ascending vasodilation in feed arteries of hamster skeletal muscle. *Microcirculation*, **2005**, 12, 551-61	2.9	13
53	Attenuated sarcomere lengthening of the aged murine left ventricle observed using two-photon fluorescence microscopy. *American Journal of Physiology - Heart and Circulatory Physiology*, **2015**, 309, H918-25	5.2	12
52	Differential adrenergic modulation of rapid onset vasodilatation along resistance networks of skeletal muscle in old versus young mice. *Journal of Physiology*, **2016**, 594, 6987-7004	3.9	11
51	Calcitonin gene-related peptide hyperpolarizes mouse pulmonary artery endothelial tubes through K channel activation. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2018**, 315, L212-L226	5.8	11
50	Biophysical properties of microvascular endothelium: Requirements for initiating and conducting electrical signals. *Microcirculation*, **2018**, 25, e12429	2.9	10
49	Advanced age protects resistance arteries of mouse skeletal muscle from oxidative stress through attenuating apoptosis induced by hydrogen peroxide. *Journal of Physiology*, **2019**, 597, 3801-3816	3.9	8
48	Microvascular mechanisms limiting skeletal muscle blood flow with advancing age. *Journal of Applied Physiology*, **2018**, 125, 1851-1859	3.7	8
47	Increased amplitude of inward rectifier K currents with advanced age in smooth muscle cells of murine superior epigastric arteries. *American Journal of Physiology - Heart and Circulatory Physiology*, **2017**, 312, H1203-H1214	5.2	7

46	Neurovascular proximity in the diaphragm muscle of adult mice. *Microcirculation*, **2012**, 19, 306-15	2.9	7
45	Motor nerve topology reflects myocyte morphology in hamster retractor and epitrochlearis muscles. *Journal of Morphology*, **2000**, 246, 103-17	1.6	7
44	Female sex and Western-style diet protect mouse resistance arteries during acute oxidative stress. *American Journal of Physiology - Cell Physiology*, **2020**, 318, C627-C639	5.4	7
43	Role of smooth muscle activation in conduction of vasodilation along isolated hamster feed arteries. *Journal of Vascular Research*, **1998**, 35, 405-12	1.9	6
42	Apoptosis in resistance arteries induced by hydrogen peroxide: greater resilience of endothelium versus smooth muscle. *American Journal of Physiology - Heart and Circulatory Physiology*, **2021**, 320, H1625-H1633	5.2	5
41	Recovery of blood flow regulation in microvascular resistance networks during regeneration of mouse gluteus maximus muscle. *Journal of Physiology*, **2019**, 597, 1401-1417	3.9	5
40	Gene expression profiles of ion channels and receptors in mouse resistance arteries: Effects of cell type, vascular bed, and age. *Microcirculation*, **2018**, 25, e12452	2.9	4
39	Attenuated rapid onset vasodilation with greater force production in skeletal muscle of caveolin-2-/- mice. *American Journal of Physiology - Heart and Circulatory Physiology*, **2016**, 311, H415-25	5.2	4
38	Regulation of myoendothelial junction formation: bridging the gap. *Circulation Research*, **2010**, 106, 1014-6	15.7	3
37	A holder and calibration chamber for micropressure measurements. *Microvascular Research*, **1994**, 48, 403-5	3.7	3
36	Ion Channels in Control of Blood Flow: Electrical Conduction Along Endothelium of Resistance Arteries **2016**, 79-99		2
35	Microiontophoresis and micromanipulation for intravital fluorescence imaging of the microcirculation. *Journal of Visualized Experiments*, **2011**,	1.6	2
34	Frontiers in microcirculation: control processes and clinical applications. *Microcirculation*, **2010**, 17, 159-63	2.9	2
33	Differential hyperpolarization to substance P and calcitonin gene-related peptide in smooth muscle versus endothelium of mouse mesenteric artery. *Microcirculation*, **2021**, 28, e12733	2.9	2
32	Aging alters spontaneous and neurotransmitter-mediated Ca signaling in smooth muscle cells of mouse mesenteric arteries. *Microcirculation*, **2020**, 27, e12607	2.9	1
31	Blood flow restriction without sympathetic vasoconstriction in ageing skeletal muscle during exercise. *Journal of Physiology*, **2014**, 592, 4607-8	3.9	1
30	Resolution of Ca2+ dynamics underlying conducted vasodilation: The Ca2+ wave.. *FASEB Journal*, **2006**, 20, A277	0.9	1
29	Functionalizing biomaterials to promote neurovascular regeneration following skeletal muscle injury. *American Journal of Physiology - Cell Physiology*, **2021**, 320, C1099-C1111	5.4	1

28	Comment on Point:Counterpoint "The muscle pump is/is not an important determinant of muscle blood flow during exercise". *Journal of Applied Physiology*, **2005**, 99, 2451	3.7
27	Arteriolar smooth muscle calcium dynamics in hamster cheek pouch in vivo. *FASEB Journal*, **2006**, 20, A273	0.9
26	Regional differences in vascular sympathetic innervation are maintained in aging C57Bl/6 mice. *FASEB Journal*, **2006**, 20, A271	0.9
25	A Novel Signaling Pathway for Conducted Vasodilation in Hamster Feed Arteries. *FASEB Journal*, **2006**, 20, A276	0.9
24	Connexin isoform expression in microvascular smooth muscle and endothelium. *FASEB Journal*, **2007**, 21, A1217	0.9
23	Neurovascular alignment in mouse diaphragm muscle. *FASEB Journal*, **2007**, 21, A482	0.9
22	Hypertension compromises functional hyperemia in hamster feed arteries. *FASEB Journal*, **2008**, 22, 122-122	0.9
21	Recovery of Functional Vasodilation During Skeletal Muscle Regeneration. *FASEB Journal*, **2018**, 32, 573.4	0.9
20	Protective Effects of Diet and Sex on Cell Death and Intracellular Calcium in Resistance Arteries during Oxidative Stress. *FASEB Journal*, **2018**, 32, 845.3	0.9
19	Constitutive activation of □adrenoreceptors with advanced age impairs rapid onset vasodilation: key role for feed arteries (674.6). *FASEB Journal*, **2014**, 28, 674.6	0.9
18	Advanced Age Increases the Amplitude of ATP-sensitive K+ Channel Currents in Murine Resistance Artery Smooth Muscle Cells. *FASEB Journal*, **2015**, 29, 786.1	0.9
17	Selective functional sympatholysis promotes blood flow distribution to recruited muscle fibers. *FASEB Journal*, **2009**, 23, 948.14	0.9
16	Role for Kv1.3 channels in sympathetic neurovascular transmission. *FASEB Journal*, **2009**, 23, 952.12	0.9
15	Fast calcium responses along endothelium of arteriolar networks during blood flow. *FASEB Journal*, **2009**, 23, 948.18	0.9
14	Differences in expression and function of ryanodine receptors between arteries and arterioles in the mouse. *FASEB Journal*, **2010**, 24, 777.5	0.9
13	Functional adrenoreceptor distribution in arteriolar networks of mouse gluteus maximus muscle. *FASEB Journal*, **2010**, 24, 976.5	0.9
12	Tuning electrical conduction along endothelial cell tubes via Ca2+-activated K+ channels. *FASEB Journal*, **2012**, 26, 1058.12	0.9
11	Aging differentially alters calcium signals and myogenic tone in murine cremaster muscle feed arteries and downstream arterioles. *FASEB Journal*, **2012**, 26, 861.3	0.9

List of Publications

10	Differential roles for 1- versus 2- adrenoreceptor activation of mouse mesenteric arterial networks in vivo. *FASEB Journal*, **2012**, 26, 853.11	0.9
9	Aging impairs electrical conduction along resistance artery endothelium via enhanced signal dissipation through KCa channels. *FASEB Journal*, **2012**, 26, 861.2	0.9
8	Aging increases the amplitude of spontaneous transient outward currents in murine resistance artery smooth muscle cells. *FASEB Journal*, **2013**, 27, 679.4	0.9
7	Depolarization of collecting lymphatic endothelium with acetylcholine or TRPV4 activation. *FASEB Journal*, **2013**, 27, 678.3	0.9
6	Altered electrical reactivity of endothelial tubes with aging: Role of mitochondria and Ca2+-activated K+channels. *FASEB Journal*, **2013**, 27, 679.1	0.9
5	Aging alters reactivity of microvascular resistance networks in mouse skeletal muscle. *FASEB Journal*, **2013**, 27, 679.2	0.9
4	Aging attenuates spontaneous endothelial Ca2+ events with altered perivascular nerve function in mouse mesenteric arteries in vivo. *FASEB Journal*, **2013**, 27, 901.3	0.9
3	Impaired Ca2+ signaling following acutely elevated glucose in mouse endothelial cell tubes. *FASEB Journal*, **2013**, 27, 678.2	0.9
2	Enhanced functional sympatholysis through endothelial signalling in healthy young men and women. *Journal of Physiology*, **2016**, 594, 7149-7150	3.9
1	Endothelial cells promote smooth muscle cell resilience to H O -induced cell death in mouse cerebral arteries.. *Acta Physiologica*, **2022**, e13819	5.6