

Gary K Owens

List of Publications by Year in Descending Order

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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.

120 papers	14,820 citations	65 h-index	121 g-index
125 ext. papers	16,890 ext. citations	10.7 avg, IF	6.79 L-index

#	Paper	IF	Citations
120	SREBP1 regulates Lgals3 activation in response to cholesterol loading. <i>Molecular Therapy - Nucleic Acids</i> , 2022 , 28, 892-909	10.7	1
119	Enhanced single-cell RNA-seq workflow reveals coronary artery disease cellular cross-talk and candidate drug targets. <i>Atherosclerosis</i> , 2021 , 340, 12-22	3.1	6
118	SMC-Derived Hyaluronan Modulates Vascular SMC Phenotype in Murine Atherosclerosis. <i>Circulation Research</i> , 2021 , 129, 992-1005	15.7	0
117	KLF4 (Kruppel-Like Factor 4)-Dependent Perivascular Plasticity Contributes to Adipose Tissue inflammation. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2021 , 41, 284-301	9.4	4
116	Sex-Stratified Gene Regulatory Networks Reveal Female Key Driver Genes of Atherosclerosis Involved in Smooth Muscle Cell Phenotype Switching. <i>Circulation</i> , 2021 , 143, 713-726	16.7	18
115	Multiple cell types contribute to the atherosclerotic lesion fibrous cap by PDGFR α and bioenergetic mechanisms. <i>Nature Metabolism</i> , 2021 , 3, 166-181	14.6	19
114	H3K4 di-methylation governs smooth muscle lineage identity and promotes vascular homeostasis by restraining plasticity. <i>Developmental Cell</i> , 2021 , 56, 2765-2782.e10	10.2	5
113	Pericyte Bridges in Homeostasis and Hyperglycemia. <i>Diabetes</i> , 2020 , 69, 1503-1517	0.9	14
112	Clonally expanding smooth muscle cells promote atherosclerosis by escaping efferocytosis and activating the complement cascade. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 15818-15826	11.5	36
111	Myh11+ microvascular mural cells and derived mesenchymal stem cells promote retinal fibrosis. <i>Scientific Reports</i> , 2020 , 10, 15808	4.9	7
110	Genetic Regulation of Atherosclerosis-Relevant Phenotypes in Human Vascular Smooth Muscle Cells. <i>Circulation Research</i> , 2020 , 127, 1552-1565	15.7	12
109	Stem Cell Pluripotency Genes Klf4 and Oct4 Regulate Complex SMC Phenotypic Changes Critical in Late-Stage Atherosclerotic Lesion Pathogenesis. <i>Circulation</i> , 2020 , 142, 2045-2059	16.7	65
108	Perivascular cell-specific knockout of the stem cell pluripotency gene Oct4 inhibits angiogenesis. <i>Nature Communications</i> , 2019 , 10, 967	17.4	18
107	Klf4 has an unexpected protective role in perivascular cells within the microvasculature. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2018 , 315, H402-H414	5.2	11
106	Interleukin-1 β has atheroprotective effects in advanced atherosclerotic lesions of mice. <i>Nature Medicine</i> , 2018 , 24, 1418-1429	50.5	115
105	Irradiation abolishes smooth muscle investment into vascular lesions in specific vascular beds. <i>JCI Insight</i> , 2018 , 3,	9.9	12
104	"Attack of the Clones": Commonalities Between Cancer and Atherosclerosis. <i>Circulation Research</i> , 2017 , 120, 624-626	15.7	21

103	Shifting the Focus of Preclinical, Murine Atherosclerosis Studies From Prevention to Late-Stage Intervention. <i>Circulation Research</i> , 2017 , 120, 775-777	15.7	10
102	Smooth muscle cell-specific deletion of unexpectedly leads to impaired development of advanced atherosclerotic lesions. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2017 , 312, H943-H958	5.2	23
101	The CANTOS Trial: One Important Step for Clinical Cardiology but a Giant Leap for Vascular Biology. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2017 , 37, e174-e177	9.4	44
100	KLF4-dependent perivascular cell plasticity mediates pre-metastatic niche formation and metastasis. <i>Nature Medicine</i> , 2017 , 23, 1176-1190	50.5	105
99	Vascular Smooth Muscle Cells in Atherosclerosis. <i>Circulation Research</i> , 2016 , 118, 692-702	15.7	972
98	Origin of Matrix-Producing Cells That Contribute to Aortic Fibrosis in Hypertension. <i>Hypertension</i> , 2016 , 67, 461-8	8.5	43
97	KLF4 is a key determinant in the development and progression of cerebral cavernous malformations. <i>EMBO Molecular Medicine</i> , 2016 , 8, 6-24	12	108
96	Activation of the pluripotency factor OCT4 in smooth muscle cells is atheroprotective. <i>Nature Medicine</i> , 2016 , 22, 657-65	50.5	100
95	Coronary Artery Disease Associated Transcription Factor TCF21 Regulates Smooth Muscle Precursor Cells That Contribute to the Fibrous Cap. <i>PLoS Genetics</i> , 2015 , 11, e1005155	6	61
94	Response to letter regarding article, "Inhibition of interleukin-1 β decreases aneurysm formation and progression in a novel model of thoracic aortic aneurysm". <i>Circulation</i> , 2015 , 131, e400	16.7	1
93	Recent insights into the cellular biology of atherosclerosis. <i>Journal of Cell Biology</i> , 2015 , 209, 13-22	7.3	591
92	Epigenetic Control of Smooth Muscle Cell Identity and Lineage Memory. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2015 , 35, 2508-16	9.4	65
91	KLF4-dependent phenotypic modulation of smooth muscle cells has a key role in atherosclerotic plaque pathogenesis. <i>Nature Medicine</i> , 2015 , 21, 628-37	50.5	585
90	Inhibition of interleukin-1 β decreases aneurysm formation and progression in a novel model of thoracic aortic aneurysms. <i>Circulation</i> , 2014 , 130, S51-9	16.7	83
89	Vascular smooth muscle cells in cerebral aneurysm pathogenesis. <i>Translational Stroke Research</i> , 2014 , 5, 338-46	7.8	90
88	5-Lipoxygenase pathway in experimental abdominal aortic aneurysms. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2014 , 34, 2669-78	9.4	18
87	Detection of histone modifications at specific gene loci in single cells in histological sections. <i>Nature Methods</i> , 2013 , 10, 171-7	21.6	166
86	Smooth muscle cell plasticity: fact or fiction?. <i>Circulation Research</i> , 2013 , 112, 17-22	15.7	119

85	TNF- α induces phenotypic modulation in cerebral vascular smooth muscle cells: implications for cerebral aneurysm pathology. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2013 , 33, 1564-73	7.3	105
84	Loss of CDKN2B promotes p53-dependent smooth muscle cell apoptosis and aneurysm formation. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2013 , 33, e1-e10	9.4	86
83	Genetic and pharmacologic disruption of interleukin-1 β signaling inhibits experimental aortic aneurysm formation. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2013 , 33, 294-304	9.4	113
82	Cigarette smoke modulates vascular smooth muscle phenotype: implications for carotid and cerebrovascular disease. <i>PLoS ONE</i> , 2013 , 8, e71954	3.7	38
81	Epigenetic control of smooth muscle cell differentiation and phenotypic switching in vascular development and disease. <i>Annual Review of Physiology</i> , 2012 , 74, 13-40	23.1	477
80	Interleukin-1 γ modulates smooth muscle cell phenotype to a distinct inflammatory state relative to PDGF-DD via NF- κ B-dependent mechanisms. <i>Physiological Genomics</i> , 2012 , 44, 417-29	3.6	78
79	Cooperative binding of KLF4, pELK-1, and HDAC2 to a G/C repressor element in the SM22 β promoter mediates transcriptional silencing during SMC phenotypic switching in vivo. <i>Circulation Research</i> , 2012 , 111, 685-96	15.7	95
78	Smooth muscle cell phenotypic switching in atherosclerosis. <i>Cardiovascular Research</i> , 2012 , 95, 156-64	9.9	504
77	Genetic inactivation of IL-1 signaling enhances atherosclerotic plaque instability and reduces outward vessel remodeling in advanced atherosclerosis in mice. <i>Journal of Clinical Investigation</i> , 2012 , 122, 70-9	15.9	142
76	WD repeat-containing protein 5, a ubiquitously expressed histone methyltransferase adaptor protein, regulates smooth muscle cell-selective gene activation through interaction with pituitary homeobox 2. <i>Journal of Biological Chemistry</i> , 2011 , 286, 21853-64	5.4	18
75	Myocardin is differentially required for the development of smooth muscle cells and cardiomyocytes. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2011 , 300, H1707-21	5.2	31
74	The actin associated protein palladin is important for the early smooth muscle cell differentiation. <i>PLoS ONE</i> , 2010 , 5, e12823	3.7	28
73	PIAS1 mediates TGF β -induced SM α -actin gene expression through inhibition of KLF4 function-expression by protein sumoylation. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2009 , 29, 99-106	9.4	41
72	The actin-associated protein Palladin is required for development of normal contractile properties of smooth muscle cells derived from embryoid bodies. <i>Journal of Biological Chemistry</i> , 2009 , 284, 2121-30	5.4	23
71	Oxidized phospholipids induce type VIII collagen expression and vascular smooth muscle cell migration. <i>Circulation Research</i> , 2009 , 104, 609-18	15.7	100
70	PDGF-DD, a novel mediator of smooth muscle cell phenotypic modulation, is upregulated in endothelial cells exposed to atherosclerosis-prone flow patterns. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009 , 296, H442-52	5.2	59
69	Sp1-dependent activation of KLF4 is required for PDGF-BB-induced phenotypic modulation of smooth muscle. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009 , 296, H1027-37	5.2	115
68	Smooth muscle phenotypic modulation is an early event in aortic aneurysms. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2009 , 138, 1392-9	1.5	202

67	Derivation of contractile smooth muscle cells from embryonic stem cells. <i>Methods in Molecular Biology</i> , 2009 , 482, 345-67	1.4	8
66	Conditional deletion of Krüppel-like factor 4 delays downregulation of smooth muscle cell differentiation markers but accelerates neointimal formation following vascular injury. <i>Circulation Research</i> , 2008 , 102, 1548-57	15.7	176
65	Sphingosine-1-phosphate receptor subtypes differentially regulate smooth muscle cell phenotype. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2008 , 28, 1454-61	9.4	77
64	Pitx2 is functionally important in the early stages of vascular smooth muscle cell differentiation. <i>Journal of Cell Biology</i> , 2008 , 181, 461-73	7.3	42
63	The Requirement of CC-Chemokine Receptor-2 (CCR2) Expression by Bone Marrow-Derived Cells (BMCs) for Arteriogenesis is Stimulus Dependent. <i>FASEB Journal</i> , 2008 , 22, 1147.14	0.9	
62	Diminished PDGF-B expression in bone-marrow derived cells leads to increased hypoxia-induced angiogenesis in a novel chimeric mouse model. <i>FASEB Journal</i> , 2008 , 22, 67-67	0.9	
61	Concise review: epigenetic mechanisms contribute to pluripotency and cell lineage determination of embryonic stem cells. <i>Stem Cells</i> , 2007 , 25, 2-9	5.8	143
60	Programming smooth muscle plasticity with chromatin dynamics. <i>Circulation Research</i> , 2007 , 100, 1428-41	15.7	126
59	Platelet-derived growth factor-BB represses smooth muscle cell marker genes via changes in binding of MKL factors and histone deacetylases to their promoters. <i>American Journal of Physiology - Cell Physiology</i> , 2007 , 292, C886-95	5.4	90
58	Oxidized phospholipids induce phenotypic switching of vascular smooth muscle cells in vivo and in vitro. <i>Circulation Research</i> , 2007 , 101, 792-801	15.7	171
57	Multiple repressor pathways contribute to phenotypic switching of vascular smooth muscle cells. <i>American Journal of Physiology - Cell Physiology</i> , 2007 , 292, C59-69	5.4	190
56	Smooth muscle cells and myofibroblasts use distinct transcriptional mechanisms for smooth muscle alpha-actin expression. <i>Circulation Research</i> , 2007 , 101, 883-92	15.7	70
55	Molecular control of vascular smooth muscle cell differentiation and phenotypic plasticity. <i>Novartis Foundation Symposium</i> , 2007 , 283, 174-91; discussion 191-3, 238-41		117
54	Sp1 is required for expression of KLF4 in phenotypically modulated smooth muscle cells. <i>FASEB Journal</i> , 2007 , 21, A68	0.9	
53	POVPC induces the smooth muscle cells inflammatory phenotype. <i>FASEB Journal</i> , 2007 , 21, A517	0.9	
52	Excitation-transcription coupling in arterial smooth muscle. <i>Circulation Research</i> , 2006 , 98, 868-78	15.7	168
51	PRISM/PRDM6, a transcriptional repressor that promotes the proliferative gene program in smooth muscle cells. <i>Molecular and Cellular Biology</i> , 2006 , 26, 2626-36	4.8	93
50	Origin of neointimal smooth muscle: we've come full circle. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2006 , 26, 2579-81	9.4	64

49	Assessment of contractility of purified smooth muscle cells derived from embryonic stem cells. <i>Stem Cells</i> , 2006 , 24, 1678-88	5.8	56
48	Developmental Vascular Biology Workshop II Abstracts February 18, 2006, Asilomar Conference Grounds, Pacific Grove, California. <i>Microcirculation</i> , 2006 , 13, 131-172	2.9	
47	Control of SRF binding to CArG box chromatin regulates smooth muscle gene expression in vivo. <i>Journal of Clinical Investigation</i> , 2006 , 116, 36-48	15.9	193
46	Paracrine Effect of Bone Marrow Cells on Hypoxia-Mediated Vascular Growth. <i>FASEB Journal</i> , 2006 , 20, A716	0.9	
45	Regulation of alpha-smooth muscle actin expression in granulation tissue myofibroblasts is dependent on the intronic CArG element and the transforming growth factor-beta1 control element. <i>American Journal of Pathology</i> , 2005 , 166, 1343-51	5.8	78
44	Stem cells and their derivatives can bypass the requirement of myocardin for smooth muscle gene expression. <i>Developmental Biology</i> , 2005 , 288, 502-13	3.1	47
43	ANG II type 2 receptor regulates smooth muscle growth and force generation in late fetal mouse development. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2005 , 288, H96-102	5.2	22
42	PIAS1 activates the expression of smooth muscle cell differentiation marker genes by interacting with serum response factor and class I basic helix-loop-helix proteins. <i>Molecular and Cellular Biology</i> , 2005 , 25, 8009-23	4.8	44
41	Molecular determinants of vascular smooth muscle cell diversity. <i>Circulation Research</i> , 2005 , 96, 280-91	15.7	238
40	Kruppel-like factor 4 abrogates myocardin-induced activation of smooth muscle gene expression. <i>Journal of Biological Chemistry</i> , 2005 , 280, 9719-27	5.4	250
39	5RCaG degeneracy in smooth muscle alpha-actin is required for injury-induced gene suppression in vivo. <i>Journal of Clinical Investigation</i> , 2005 , 115, 418-27	15.9	81
38	Platelet-derived growth factor-BB and Ets-1 transcription factor negatively regulate transcription of multiple smooth muscle cell differentiation marker genes. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2004 , 286, H2042-51	5.2	91
37	Molecular regulation of vascular smooth muscle cell differentiation in development and disease. <i>Physiological Reviews</i> , 2004 , 84, 767-801	47.9	2444
36	Forced expression of myocardin is not sufficient for induction of smooth muscle differentiation in multipotential embryonic cells. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2004 , 24, 1596-601	9.4	84
35	Transforming growth factor-beta1 signaling contributes to development of smooth muscle cells from embryonic stem cells. <i>American Journal of Physiology - Cell Physiology</i> , 2004 , 287, C1560-8	5.4	167
34	Lost in transdifferentiation. <i>Journal of Clinical Investigation</i> , 2004 , 113, 1249-51	15.9	36
33	Myocardin is a critical serum response factor cofactor in the transcriptional program regulating smooth muscle cell differentiation. <i>Molecular and Cellular Biology</i> , 2003 , 23, 2425-37	4.8	294
32	Combinatorial control of smooth muscle-specific gene expression. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2003 , 23, 737-47	9.4	146

31	Myocardin is a key regulator of CArG-dependent transcription of multiple smooth muscle marker genes. <i>Circulation Research</i> , 2003 , 92, 856-64	15.7	296
30	Smooth muscle alpha-actin gene requires two E-boxes for proper expression in vivo and is a target of class I basic helix-loop-helix proteins. <i>Circulation Research</i> , 2003 , 92, 840-7	15.7	66
29	A transforming growth factor-beta control element required for SM alpha-actin expression in vivo also partially mediates GKLf-dependent transcriptional repression. <i>Journal of Biological Chemistry</i> , 2003 , 278, 48004-11	5.4	89
28	The smooth muscle myosin heavy chain gene exhibits smooth muscle subtype-selective modular regulation in vivo. <i>Journal of Biological Chemistry</i> , 2001 , 276, 39076-87	5.4	40
27	Smooth muscle differentiation marker gene expression is regulated by RhoA-mediated actin polymerization. <i>Journal of Biological Chemistry</i> , 2001 , 276, 341-7	5.4	300
26	Recruitment of serum response factor and hyperacetylation of histones at smooth muscle-specific regulatory regions during differentiation of a novel P19-derived in vitro smooth muscle differentiation system. <i>Circulation Research</i> , 2001 , 88, 1127-34	15.7	143
25	Selective expression of an endogenous inhibitor of FAK regulates proliferation and migration of vascular smooth muscle cells. <i>Molecular and Cellular Biology</i> , 2001 , 21, 1565-72	4.8	136
24	CArG elements control smooth muscle subtype-specific expression of smooth muscle myosin in vivo. <i>Journal of Clinical Investigation</i> , 2001 , 107, 823-34	15.9	120
23	Development of a smooth muscle-targeted cre recombinase mouse reveals novel insights regarding smooth muscle myosin heavy chain promoter regulation. <i>Circulation Research</i> , 2000 , 87, 363-9	15.7	75
22	Positive- and negative-acting Kruppel-like transcription factors bind a transforming growth factor beta control element required for expression of the smooth muscle cell differentiation marker SM22alpha in vivo. <i>Journal of Biological Chemistry</i> , 2000 , 275, 37798-806	5.4	201
21	Smooth muscle alpha-actin CArG elements coordinate formation of a smooth muscle cell-selective, serum response factor-containing activation complex. <i>Circulation Research</i> , 2000 , 86, 221-32	15.7	100
20	Molecular mechanisms of decreased smooth muscle differentiation marker expression after vascular injury. <i>Journal of Clinical Investigation</i> , 2000 , 106, 1139-47	15.9	179
19	Differential activation of the SMalphaA promoter in smooth vs. skeletal muscle cells by bHLH factors. <i>American Journal of Physiology - Cell Physiology</i> , 1999 , 276, C1420-31	5.4	25
18	Regulation of smooth muscle alpha-actin expression in vivo is dependent on CArG elements within the 5' and first intron promoter regions. <i>Circulation Research</i> , 1999 , 84, 852-61	15.7	208
17	Early plus delayed hirudin reduces restenosis in the atherosclerotic rabbit more than early administration alone: potential implications for dosing of antithrombin agents. <i>Circulation</i> , 1998 , 98, 2301-6	16.7	24
16	Smooth muscle-specific expression of the smooth muscle myosin heavy chain gene in transgenic mice requires 5' flanking and first intronic DNA sequence. <i>Circulation Research</i> , 1998 , 82, 908-17	15.7	125
15	Two MCAT elements of the SM alpha-actin promoter function differentially in SM vs. non-SM cells. <i>American Journal of Physiology - Cell Physiology</i> , 1998 , 275, C608-18	5.4	27
14	Substitution of the degenerate smooth muscle (SM) alpha-actin CC(A/T-rich)6GG elements with c-fos serum response elements results in increased basal expression but relaxed SM cell specificity and reduced angiotensin II inducibility. <i>Journal of Biological Chemistry</i> , 1998 , 273, 8398-406	5.4	45

13	A transforming growth factor beta (TGFbeta) control element drives TGFbeta-induced stimulation of smooth muscle alpha-actin gene expression in concert with two CArG elements. <i>Journal of Biological Chemistry</i> , 1997 , 272, 10948-56	5.4	234
12	Interaction of CArG elements and a GC-rich repressor element in transcriptional regulation of the smooth muscle myosin heavy chain gene in vascular smooth muscle cells. <i>Journal of Biological Chemistry</i> , 1997 , 272, 29842-51	5.4	45
11	Expression of the smooth muscle myosin heavy chain gene is regulated by a negative-acting GC-rich element located between two positive-acting serum response factor-binding elements. <i>Journal of Biological Chemistry</i> , 1997 , 272, 6332-40	5.4	92
10	Angiotensin II-induced stimulation of smooth muscle alpha-actin expression by serum response factor and the homeodomain transcription factor MHox. <i>Circulation Research</i> , 1997 , 81, 600-10	15.7	80
9	Development of the aortic vessel wall as defined by vascular smooth muscle and extracellular matrix markers. <i>Developmental Biology</i> , 1996 , 178, 375-92	3.1	160
8	The smooth muscle alpha-actin gene promoter is differentially regulated in smooth muscle versus non-smooth muscle cells. <i>Journal of Biological Chemistry</i> , 1995 , 270, 7631-43	5.4	137
7	Human thrombin receptor-activating peptide-induced proliferation of cultured vascular smooth muscle cells exhibits species specificity. <i>Drug Development Research</i> , 1995 , 35, 7-12	5.1	4
6	A retinoic acid-induced clonal cell line derived from multipotential P19 embryonal carcinoma cells expresses smooth muscle characteristics. <i>Circulation Research</i> , 1995 , 76, 742-9	15.7	49
5	Determinants of angiotensin II-induced hypertrophy versus hyperplasia in vascular smooth muscle. <i>Drug Development Research</i> , 1993 , 29, 83-87	5.1	14
4	Platelet-derived growth factor regulates actin isoform expression and growth state in cultured rat aortic smooth muscle cells. <i>Journal of Cellular Physiology</i> , 1990 , 142, 635-42	7	97
3	Platelet-derived growth factor-induced destabilization of smooth muscle alpha-actin mRNA. <i>Journal of Cellular Physiology</i> , 1990 , 145, 391-7	7	59
2	Transcriptomic-based clustering of advanced atherosclerotic plaques identifies subgroups of plaques with differential underlying biology that associate with clinical presentation		1
1	Pericyte Bridges in Homeostasis and Hyperglycemia: Reconsidering Pericyte Dropout and Microvascular Structures		1