George E Davis

List of Publications by Year
in descending order

95 papers	11,469 citations	36203 51 h-index	62479 80 g-index
95 all docs	95 docs citations	95 times ranked	11232 citing authors

#	Article	IF	Citations
1	Endothelial Extracellular Matrix. Circulation Research, 2005, 97, 1093-1107.	2.0	1,063
2	Pericyte recruitment during vasculogenic tube assembly stimulates endothelial basement membrane matrix formation. Blood, 2009, 114, 5091-5101.	0.6	504
3	Endothelial tubes assemble from intracellular vacuoles in vivo. Nature, 2006, 442, 453-456.	13.7	485
4	Proteolytic exposure of a cryptic site within collagen type IV is required for angiogenesis and tumor growth in vivo. Journal of Cell Biology, 2001, 154, 1069-1080.	2.3	445
5	Consensus guidelines for the use and interpretation of angiogenesis assays. Angiogenesis, 2018, 21, 425-532.	3.7	429
6	Regulation of Tissue Injury Responses by the Exposure of Matricryptic Sites within Extracellular Matrix Molecules. American Journal of Pathology, 2000, 156, 1489-1498.	1.9	398
7	An Î±2Î²1 Integrin-Dependent Pinocytic Mechanism Involving Intracellular Vacuole Formation and Coalescence Regulates Capillary Lumen and Tube Formation in Three-Dimensional Collagen Matrix. Experimental Cell Research, 1996, 224, 39-51.	1.2	356
8	Differential gene expression during capillary morphogenesis in 3D collagen matrices. Journal of Cell Science, 2001, 114, 2755-2773.	1.2	352
9	The cerebral cavernous malformation signaling pathway promotes vascular integrity via Rho GTPases. Nature Medicine, 2009, 15, 177-184.	15.2	340
10	Cellular and Molecular Mechanisms of Vascular Lumen Formation. Developmental Cell, 2009, 16, 222-231.	3.1	334
11	Affinity of integrins for damaged extracellular matrix: Î±vÎ²3 binds to denatured collagen type I through RGD sites. Biochemical and Biophysical Research Communications, 1992, 182, 1025-1031.	1.0	317
12	Coregulation of vascular tube stabilization by endothelial cell TIMP-2 and pericyte TIMP-3. Journal of Cell Biology, 2006, 175, 179-191.	2.3	275
13	Angiogenesis. Cold Spring Harbor Perspectives in Biology, 2011, 3, a005090-a005090.	2.3	273
14	RGD-Dependent Vacuolation and Lumen Formation Observed during Endothelial Cell Morphogenesis in Three-Dimensional Fibrin Matrices Involves the Î±vÎ²3 and Î±5Î²1 Integrins. American Journal of Pathology, 2000, 156, 1673-1683.	1.9	272
15	Endothelial-derived PDGF-BB and HB-EGF coordinately regulate pericyte recruitment during vasculogenic tube assembly and stabilization. Blood, 2010, 116, 4720-4730.	0.6	232
16	Molecular basis of endothelial cell morphogenesis in three-dimensional extracellular matrices. The Anatomical Record, 2002, 268, 252-275.	2.3	229
17	The Cdc42 and Rac1 GTPases are required for capillary lumen formation in three-dimensional extracellular matrices. Journal of Cell Science, 2002, 115, 1123-1136.	1.2	216
18	Endothelial cell lumen and vascular guidance tunnel formation requires MT1-MMPâ€"dependent proteolysis in 3-dimensional collagen matrices. Blood, 2009, 114, 237-247.	0.6	208

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19	The Mac-1 and p150,95 Î²2 integrins bind denatured proteins to mediate leukocyte cell-substrate adhesion. Experimental Cell Research, 1992, 200, 242-252.	1.2	200
20	Endothelial Cell-Pericyte Interactions Stimulate Basement Membrane Matrix Assembly: Influence on Vascular Tube Remodeling, Maturation, and Stabilization. Microscopy and Microanalysis, 2012, 18, 68-80.	0.2	196
21	The Neuropilin 1 Cytoplasmic Domain Is Required for VEGF-A-Dependent Arteriogenesis. Developmental Cell, 2013, 25, 156-168.	3.1	184
22	MMP-1 activation by serine proteases and MMP-10 induces human capillary tubular network collapse and regression in 3D collagen matrices. Journal of Cell Science, 2005, 118, 2325-2340.	1.2	183
23	Chapter 5 In Vitro Three Dimensional Collagen Matrix Models of Endothelial Lumen Formation During Vasculogenesis and Angiogenesis. Methods in Enzymology, 2008, 443, 83-101.	0.4	181
24	Cdc42- and Rac1-mediated endothelial lumen formation requires Pak2, Pak4 and Par3, and PKC-dependent signaling. Journal of Cell Science, 2008, 121, 989-1001.	1.2	178
25	Modulation of Calcium Current in Arteriolar Smooth Muscle by Î±vÎ²3 and Î±5Î²1 Integrin Ligands. Journal of Cell Biology, 1998, 143, 241-252.	2.3	177
26	The Cdc42 and Rac1 GTPases are required for capillary lumen formation in three-dimensional extracellular matrices. Journal of Cell Science, 2002, 115, 1123-36.	1.2	175
27	Molecular Basis for Endothelial Lumen Formation and Tubulogenesis During Vasculogenesis and Angiogenic Sprouting. International Review of Cell and Molecular Biology, 2011, 288, 101-165.	1.6	158
28	Blood Vessel Tubulogenesis Requires Rasip1 Regulation of GTPase Signaling. Developmental Cell, 2011, 20, 526-539.	3.1	148
29	Sphingosine-1-phosphate markedly induces matrix metalloproteinase and integrin-dependent human endothelial cell invasion and lumen formation in three-dimensional collagen and fibrin matrices. Biochemical and Biophysical Research Communications, 2003, 312, 903-913.	1.0	139
30	Vascular Smooth Muscle Î±_vÎ²₃Integrin Mediates Arteriolar Vasodilation in Response to RGD Peptides. Circulation Research, 1996, 79, 821-826.	2.0	121
31	Endothelial lumen signaling complexes control 3D matrixâ€“specific tubulogenesis through interdependent Cdc42- and MT1-MMPâ€“mediated events. Blood, 2010, 115, 5259-5269.	0.6	119
32	Mutations in 2 distinct genetic pathways result in cerebral cavernous malformations in mice. Journal of Clinical Investigation, 2011, 121, 1871-1881.	3.9	119
33	VEGF and FGF prime vascular tube morphogenesis and sprouting directed by hematopoietic stem cell cytokines. Blood, 2011, 117, 3709-3719.	0.6	115
34	Mechanisms controlling human endothelial lumen formation and tube assembly in threeâ€dimensional extracellular matrices. Birth Defects Research Part C: Embryo Today Reviews, 2007, 81, 270-285.	3.6	113
35	State-of-the-Art Methods for Evaluation of Angiogenesis and Tissue Vascularization. Circulation Research, 2015, 116, e99-132.	2.0	113
36	Microtubule Depolymerization Rapidly Collapses Capillary Tube Networks in Vitro and Angiogenic Vessels in Vivo through the Small GTPase Rho. Journal of Biological Chemistry, 2004, 279, 11686-11695.	1.6	109

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37	Identification of Dual Î±4Î²1 Integrin Binding Sites within a 38 Amino Acid Domain in the N-terminal Thrombin Fragment of Human Osteopontin. Journal of Biological Chemistry, 2001, 276, 13483-13489.	1.6	101
38	Molecular Balance of Capillary Tube Formation versus Regression in Wound Repair: Role of Matrix Metalloproteinases and Their Inhibitors. Journal of Investigative Dermatology Symposium Proceedings, 2006, 11, 44-56.	0.8	101
39	MT1-MMP- and Cdc42-dependent signaling co-regulate cell invasion and tunnel formation in 3D collagen matrices. Journal of Cell Science, 2009, 122, 4558-4569.	1.2	96
40	Extracellular matrix mediates a molecular balance between vascular morphogenesis and regression. Current Opinion in Hematology, 2008, 15, 197-203.	1.2	95
41	Formation of endothelial lumens requires a coordinated PKCÏµ-, Src-, Pak- and Raf-kinase-dependent signaling cascade downstream of Cdc42 activation. Journal of Cell Science, 2009, 122, 1812-1822.	1.2	87
42	CAPILLARY MORPHOGENESIS DURING HUMAN ENDOTHELIAL CELL INVASION OF THREE-DIMENSIONAL COLLAGEN MATRICES. In Vitro Cellular and Developmental Biology - Animal, 2000, 36, 513.	0.7	86
43	Cdc42 is required for cytoskeletal support of endothelial cell adhesion during blood vessel formation. Development (Cambridge), 2015, 142, 3058-70.	1.2	83
44	ETS-related Gene (ERG) Controls Endothelial Cell Permeability via Transcriptional Regulation of the Claudin 5 (CLDN5) Gene. Journal of Biological Chemistry, 2012, 287, 6582-6591.	1.6	82
45	Tumor cell invasion of collagen matrices requires coordinate lipid agonist-induced G-protein and membrane-type matrix metalloproteinase-1-dependent signaling. Molecular Cancer, 2006, 5, 69.	7.9	81
46	Molecular Mechanisms Controlling Vascular Lumen Formation in Three-Dimensional Extracellular Matrices. Cells Tissues Organs, 2012, 195, 122-143.	1.3	79
47	An Integrin and Rho GTPase-Dependent Pinocytic Vacuole Mechanism Controls Capillary Lumen Formation in Collagen and Fibrin Matrices. Microcirculation, 2003, 10, 27-44.	1.0	75
48	An integrin and Rho GTPase-dependent pinocytic vacuole mechanism controls capillary lumen formation in collagen and fibrin matrices. Microcirculation, 2003, 10, 27-44.	1.0	71
49	RhoJ is an endothelial cell-restricted Rho GTPase that mediates vascular morphogenesis and is regulated by the transcription factor ERG. Blood, 2011, 118, 1145-1153.	0.6	70
50	Coordinate Induction of the Actin Cytoskeletal Regulatory Proteins Gelsolin, Vasodilator-Stimulated Phosphoprotein, and Profilin during Capillary Morphogenesisin Vitro. Experimental Cell Research, 1999, 249, 22-32.	1.2	66
51	Defining Endothelial Cell-Derived Factors That Promote Pericyte Recruitment and Capillary Network Assembly. Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 2632-2648.	1.1	62
52	Matricryptic sites control tissue injury responses in the cardiovascular system: Relationships to pattern recognition receptor regulated events. Journal of Molecular and Cellular Cardiology, 2010, 48, 454-460.	0.9	57
53	Rasip1-Mediated Rho GTPase Signaling Regulates Blood Vessel Tubulogenesis via Nonmuscle Myosin II. Circulation Research, 2016, 119, 810-826.	2.0	51
54	Cdc42 and k-Ras Control Endothelial Tubulogenesis through Apical Membrane and Cytoskeletal Polarization: Novel Stimulatory Roles for GTPase Effectors, the Small GTPases, Rac2 and Rap1b, and Inhibitory Influence of Arhgap31 and Rasa1. PLoS ONE, 2016, 11, e0147758.	1.1	51

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55	Molecular control of capillary morphogenesis and maturation by recognition and remodeling of the extracellular matrix: functional roles of endothelial cells and pericytes in health and disease. Connective Tissue Research, 2015, 56, 392-402.	1.1	49
56	Dynamic Regulation of the Cerebral Cavernous Malformation Pathway Controls Vascular Stability and Growth. Developmental Cell, 2012, 23, 342-355.	3.1	44
57	Hematopoietic Stem Cell Cytokines and Fibroblast Growth factor-2 Stimulate Human Endothelial Cell-Pericyte Tube Co-Assembly in 3D Fibrin Matrices under Serum-Free Defined Conditions. PLoS ONE, 2013, 8, e85147.	1.1	40
58	EB1, p150Glued, and Clasp1 control endothelial tubulogenesis through microtubule assembly, acetylation, and apical polarization. Blood, 2013, 121, 3521-3530.	0.6	39
59	CDP-diacylglycerol synthetase-controlled phosphoinositide availability limits VEGFA signaling and vascular morphogenesis. Blood, 2012, 120, 489-498.	0.6	38
60	Proinflammatory Mediators, IL (Interleukin)-1Î², TNF (Tumor Necrosis Factor) Î±, and Thrombin Directly Induce Capillary Tube Regression. Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 365-377.	1.1	38
61	Aligned human microvessels formed in 3D fibrin gel by constraint of gel contraction. Microvascular Research, 2013, 90, 12-22.	1.1	34
62	Rasip1 is essential to blood vessel stability and angiogenic blood vessel growth. Angiogenesis, 2016, 19, 173-190.	3.7	30
63	Formation of stress fibres in human endothelial cells infected with Bartonella bacilliformis is associated with altered morphology, impaired migration and defects in cell morphogenesis. Cellular Microbiology, 2001, 3, 169-180.	1.1	29
64	Control of Vascular Tube Morphogenesis and Maturation in 3D Extracellular Matrices by Endothelial Cells and Pericytes. Methods in Molecular Biology, 2013, 1066, 17-28.	0.4	29
65	Molecular Signaling Pathways Controlling Vascular Tube Morphogenesis and Pericyte-Induced Tube Maturation in 3D Extracellular Matrices. Advances in Pharmacology, 2016, 77, 241-280.	1.2	26
66	Talin1 is required for cardiac Zâ€disk stabilization and endothelial integrity in zebrafish. FASEB Journal, 2015, 29, 4989-5005.	0.2	25
67	Defining an Upstream VEGF (Vascular Endothelial Growth Factor) Priming Signature for Downstream Factor-Induced Endothelial Cell-Pericyte Tube Network Coassembly. Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 2891-2909.	1.1	24
68	Investigating Human Vascular Tube Morphogenesis and Maturation Using Endothelial Cell-Pericyte Co-cultures and a Doxycycline-Inducible Genetic System in 3D Extracellular Matrices. Methods in Molecular Biology, 2015, 1189, 171-189.	0.4	20
69	Rasip1 controls lymphatic vessel lumen maintenance by regulating endothelial cell junctions. Development (Cambridge), 2018, 145, .	1.2	17
70	Control of endothelial tubulogenesis by Rab and Ral GTPases, and apical targeting of caveolin-1-labeled vacuoles. PLoS ONE, 2020, 15, e0235116.	1.1	17
71	An inhibitor of endothelial ETS transcription factors promotes physiologic and therapeutic vessel regression. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26494-26502.	3.3	16
72	Anti-angiogenic effects of VEGF stimulation on endothelium deficient in phosphoinositide recycling. Nature Communications, 2020, 11, 1204.	5.8	16

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73	Src- and Fyn-dependent apical membrane trafficking events control endothelial lumen formation during vascular tube morphogenesis. PLoS ONE, 2017, 12, e0184461.	1.1	15
74	Constitutive Active Mutant TIE2 Induces Enlarged Vascular Lumen Formation with Loss of Apico-basal Polarity and Pericyte Recruitment. Scientific Reports, 2019, 9, 12352.	1.6	15
75	Outside In: Inversion of Cell Polarity Controls Epithelial Lumen Formation. Developmental Cell, 2014, 31, 140-142.	3.1	13
76	Endothelial k-RasV12 Expression Induces Capillary Deficiency Attributable to Marked Tube Network Expansion Coupled to Reduced Pericytes and Basement Membranes. Arteriosclerosis, Thrombosis, and Vascular Biology, 2022, 42, 205-222.	1.1	11
77	Angiogenesis and proteinases: influence on vascular morphogenesis, stabilization and regression. Drug Discovery Today: Disease Models, 2011, 8, 13-20.	1.2	8
78	Evaluation and Characterization of Endothelial Cell Invasion and Sprouting Behavior. Methods in Molecular Biology, 2018, 1846, 249-259.	0.4	6
79	Endothelial Cell Polarization During Lumen Formation, Tubulogenesis, and Vessel Maturation in 3D Extracellular Matrices. , 2015, , 205-220.		5
80	Molecular Control of Vascular Tube Morphogenesis and Stabilization: Regulation by Extracellular Matrix, Matrix Metalloproteinases, and Endothelial Cellâ€"Pericyte Interactions. Biological and Medical Physics Series, 2011, , 17-47.	0.3	5
81	Selective and Marked Blockade of Endothelial Sprouting Behavior Using Paclitaxel and Related Pharmacologic Agents. American Journal of Pathology, 2021, 191, 2245-2264.	1.9	4
82	Molecular Regulation of Vasculogenesis and Angiogenesis: Recent Advances and Future Directions. , 2012, , 169-206.		3
83	Proinflammatory mediators, TNFÎ±, IFNÎ³, and thrombin, directly induce lymphatic capillary tube regression. Frontiers in Cell and Developmental Biology, 0, 10, .	1.8	3
84	Formation of pancreatic Î²-cells from precursor cells contributes to the reversal of established type 1 diabetes. Cellular Immunology, 2021, 364, 104360.	1.4	0
85	Cdc42 and its downstream effectors control endothelial cell invasion and lumenal morphogenesis in 3D collagen matrices. FASEB Journal, 2006, 20, A1078.	0.2	0
86	Coordinated regulation by Cdc42, integrin alpha2beta1, and membrane typeâ€1 metalloproteinaseâ€dependant signaling of capillary tube formation in 3D collagen matrices. FASEB Journal, 2007, 21, A14.	0.2	0
87	Role of extracellular matrix in vascular morphogenesis. FASEB Journal, 2007, 21, A82.	0.2	0
88	Cdc42/alpha2beta1 integrin/membrane typeâ€1 metalloproteinase complexes regulate endothelial lumen formation in 3D collagen matrices. FASEB Journal, 2008, 22, 49.7.	0.2	0
89	Potentiation of BK Channels by Î±5Î²1 Integrin Activation in Arteriolar Smooth Muscle. FASEB Journal, 2008, 22, 1145.3.	0.2	0
90	Control of microvascular tube assembly by endothelial cellâ€pericyte interactions. FASEB Journal, 2008, 22, 383.1.	0.2	0

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91	Vascular guidance tunnels direct endothelial cellâ€pericyte interactions and basement membrane matrix deposition. FASEB Journal, 2008, 22, 746.12.	0.2	0
92	A Fibronectin Fragment Elicits Vasodilatation and Alters Myogenic Responsiveness of Skeletal Muscle Arterioles. FASEB Journal, 2010, 24, 600.4.	0.2	0
93	Integrinâ€dependent and â€independent potentiation of Lâ€type Calcium Current (Cav1.2) by cell stretch. FASEB Journal, 2011, 25, 1042.2.	0.2	0
94	ECM Remodeling Events during ECâ€Pericyte Tube Coâ€Assembly in 3D Matrices. FASEB Journal, 2015, 29, 359.1.	0.2	0
95	Molecular Control of Capillary Tube Morphogenesis and Maturation Through Endothelial Cell-Pericyte Interactions: Regulation by Small GTPase-Mediated Signaling, Kinase Cascades, Extracellular Matrix Remodeling, and Defined Growth Factors. Biological and Medical Physics Series, 2018, , 1-36.	0.3	0