

Holger Gerhardt

List of Publications by Year in descending order

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135
papers

26,853
citations

13827

67
h-index

12910

131
g-index

152
all docs

152
docs citations

152
times ranked

28609
citing authors

#	ARTICLE	IF	CITATIONS
1	VEGF guides angiogenic sprouting utilizing endothelial tip cell filopodia. <i>Journal of Cell Biology</i> , 2003, 161, 1163-1177.	2.3	2,483
2	Basic and Therapeutic Aspects of Angiogenesis. <i>Cell</i> , 2011, 146, 873-887.	13.5	2,263
3	Dll4 signalling through Notch1 regulates formation of tip cells during angiogenesis. <i>Nature</i> , 2007, 445, 776-780.	13.7	1,515
4	Role of PFKFB3-Driven Glycolysis in Vessel Sprouting. <i>Cell</i> , 2013, 154, 651-663.	13.5	1,117
5	Lack of Pericytes Leads to Endothelial Hyperplasia and Abnormal Vascular Morphogenesis. <i>Journal of Cell Biology</i> , 2001, 153, 543-554.	2.3	949
6	Endothelial-pericyte interactions in angiogenesis. <i>Cell and Tissue Research</i> , 2003, 314, 15-23.	1.5	931
7	Endothelial cells dynamically compete for the tip cell position during angiogenic sprouting. <i>Nature Cell Biology</i> , 2010, 12, 943-953.	4.6	820
8	Spatially restricted patterning cues provided by heparin-binding VEGF-A control blood vessel branching morphogenesis. <i>Genes and Development</i> , 2002, 16, 2684-2698.	2.7	779
9	Angiogenesis: A Team Effort Coordinated by Notch. <i>Developmental Cell</i> , 2009, 16, 196-208.	3.1	707
10	Wnt/ β -catenin signaling controls development of the blood-brain barrier. <i>Journal of Cell Biology</i> , 2008, 183, 409-417.	2.3	680
11	Endothelial PDGF-B retention is required for proper investment of pericytes in the microvessel wall. <i>Genes and Development</i> , 2003, 17, 1835-1840.	2.7	557
12	VEGF and Notch in Tip and Stalk Cell Selection. <i>Cold Spring Harbor Perspectives in Medicine</i> , 2013, 3, a006569-a006569.	2.9	484
13	Fatty acid carbon is essential for dNTP synthesis in endothelial cells. <i>Nature</i> , 2015, 520, 192-197.	13.7	466
14	Angiogenesis selectively requires the p110 β isoform of PI3K to control endothelial cell migration. <i>Nature</i> , 2008, 453, 662-666.	13.7	459
15	A New Method for Large Scale Isolation of Kidney Glomeruli from Mice. <i>American Journal of Pathology</i> , 2002, 161, 799-805.	1.9	457
16	FOXO1 couples metabolic activity and growth state in the vascular endothelium. <i>Nature</i> , 2016, 529, 216-220.	13.7	438
17	Partial and Transient Reduction of Glycolysis by PFKFB3 Blockade Reduces Pathological Angiogenesis. <i>Cell Metabolism</i> , 2014, 19, 37-48.	7.2	429
18	Tumor Vessel Normalization by Chloroquine Independent of Autophagy. <i>Cancer Cell</i> , 2014, 26, 190-206.	7.7	358

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19	Acetylation-dependent regulation of endothelial Notch signalling by the SIRT1 deacetylase. <i>Nature</i> , 2011, 473, 234-238.	13.7	350
20	Robo4 stabilizes the vascular network by inhibiting pathologic angiogenesis and endothelial hyperpermeability. <i>Nature Medicine</i> , 2008, 14, 448-453.	15.2	346
21	Endothelium-specific platelet-derived growth factor-B ablation mimics diabetic retinopathy. <i>EMBO Journal</i> , 2002, 21, 4307-4316.	3.5	339
22	The role of differential VE-cadherin dynamics in cell rearrangement during angiogenesis. <i>Nature Cell Biology</i> , 2014, 16, 309-321.	4.6	328
23	Nrarp Coordinates Endothelial Notch and Wnt Signaling to Control Vessel Density in Angiogenesis. <i>Developmental Cell</i> , 2009, 16, 70-82.	3.1	326
24	Coordinating cell behaviour during blood vessel formation. <i>Development (Cambridge)</i> , 2011, 138, 4569-4583.	1.2	313
25	Pericytes limit tumor cell metastasis. <i>Journal of Clinical Investigation</i> , 2006, 116, 642-651.	3.9	294
26	VEGFR-3 controls tip to stalk conversion at vessel fusion sites by reinforcing Notch signalling. <i>Nature Cell Biology</i> , 2011, 13, 1202-1213.	4.6	272
27	Regulation of angiogenesis by a non-canonical Wnt-Flt1 pathway in myeloid cells. <i>Nature</i> , 2011, 474, 511-515.	13.7	244
28	Cortical and retinal defects caused by dosage-dependent reductions in VEGF-A paracrine signaling. <i>Developmental Biology</i> , 2003, 262, 225-241.	0.9	243
29	Neuropilin-1 is required for endothelial tip cell guidance in the developing central nervous system. <i>Developmental Dynamics</i> , 2004, 231, 503-509.	0.8	243
30	VEGF and endothelial guidance in angiogenic sprouting. <i>Organogenesis</i> , 2008, 4, 241-246.	0.4	237
31	Agent-based simulation of notch-mediated tip cell selection in angiogenic sprout initialisation. <i>Journal of Theoretical Biology</i> , 2008, 250, 25-36.	0.8	234
32	N-cadherin mediates pericytic-endothelial interaction during brain angiogenesis in the chicken. <i>Developmental Dynamics</i> , 2000, 218, 472-479.	0.8	231
33	Dynamic Endothelial Cell Rearrangements Drive Developmental Vessel Regression. <i>PLoS Biology</i> , 2015, 13, e1002125.	2.6	231
34	Integrin signalling regulates YAP/TAZ to control skin homeostasis. <i>Development (Cambridge)</i> , 2016, 143, 1674-87.	1.2	228
35	Endothelial cell O-glycan deficiency causes blood/lymphatic misconnections and consequent fatty liver disease in mice. <i>Journal of Clinical Investigation</i> , 2008, 118, 3725-3737.	3.9	216
36	A Two-Way Communication between Microglial Cells and Angiogenic Sprouts Regulates Angiogenesis in Aortic Ring Cultures. <i>PLoS ONE</i> , 2011, 6, e15846.	1.1	200

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37	Tumour ischaemia by interferon- β resembles physiological blood vessel regression. <i>Nature</i> , 2017, 545, 98-102.	13.7	199
38	The Endothelial Transcription Factor ERG Promotes Vascular Stability and Growth through Wnt/ β -Catenin Signaling. <i>Developmental Cell</i> , 2015, 32, 82-96.	3.1	190
39	Tipping the Balance: Robustness of Tip Cell Selection, Migration and Fusion in Angiogenesis. <i>PLoS Computational Biology</i> , 2009, 5, e1000549.	1.5	187
40	YAP and TAZ regulate adherens junction dynamics and endothelial cell distribution during vascular development. <i>ELife</i> , 2018, 7, .	2.8	186
41	Filopodia are dispensable for endothelial tip cell guidance. <i>Development (Cambridge)</i> , 2013, 140, 4031-4040.	1.2	178
42	Defective Associations between Blood Vessels and Brain Parenchyma Lead to Cerebral Hemorrhage in Mice Lacking α v Integrins. <i>Molecular and Cellular Biology</i> , 2002, 22, 7667-7677.	1.1	162
43	Blood flow drives lumen formation by inverse membrane blebbing during angiogenesis in vivo. <i>Nature Cell Biology</i> , 2016, 18, 443-450.	4.6	159
44	Defective N-sulfation of heparan sulfate proteoglycans limits PDGF-BB binding and pericyte recruitment in vascular development. <i>Genes and Development</i> , 2007, 21, 316-331.	2.7	157
45	Alk1 and Alk5 inhibition by Nrp1 controls vascular sprouting downstream of Notch. <i>Nature Communications</i> , 2015, 6, 7264.	5.8	143
46	Pericytes: gatekeepers in tumour cell metastasis?. <i>Journal of Molecular Medicine</i> , 2008, 86, 135-144.	1.7	142
47	VEGFRs and Notch: a dynamic collaboration in vascular patterning. <i>Biochemical Society Transactions</i> , 2009, 37, 1233-1236.	1.6	140
48	Wiring the Vascular Network with Neural Cues: A CNS Perspective. <i>Neuron</i> , 2015, 87, 271-296.	3.8	140
49	VEGF and Notch Signaling. <i>Cell Adhesion and Migration</i> , 2007, 1, 133-136.	1.1	139
50	Glycolytic regulation of cell rearrangement in angiogenesis. <i>Nature Communications</i> , 2016, 7, 12240.	5.8	131
51	Endothelial basement membrane limits tip cell formation by inducing Dll4/Notch signalling <i>in vivo</i> . <i>EMBO Reports</i> , 2011, 12, 1135-1143.	2.0	129
52	Non-canonical Wnt signalling modulates the endothelial shear stress flow sensor in vascular remodelling. <i>ELife</i> , 2016, 5, e07727.	2.8	125
53	Development of siRNA-loaded chitosan nanoparticles targeting Galectin-1 for the treatment of glioblastoma multiforme via intranasal administration. <i>Journal of Controlled Release</i> , 2016, 227, 71-81.	4.8	123
54	Vascular morphogenesis: a Wnt for every vessel?. <i>Current Opinion in Genetics and Development</i> , 2009, 19, 476-483.	1.5	120

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55	Role of Delta-like-4/Notch in the Formation and Wiring of the Lymphatic Network in Zebrafish. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2010, 30, 1695-1702.	1.1	118
56	Integrin-dependent and -independent functions of astrocytic fibronectin in retinal angiogenesis. <i>Development (Cambridge)</i> , 2011, 138, 4451-4463.	1.2	116
57	Synchronization of endothelial Dll4-Notch dynamics switch blood vessels from branching to expansion. <i>ELife</i> , 2016, 5, .	2.8	115
58	Quantitative assessment of angiogenesis, perfused blood vessels and endothelial tip cells in the postnatal mouse brain. <i>Nature Protocols</i> , 2015, 10, 53-74.	5.5	105
59	Sensitization of glioblastoma tumor micro-environment to chemo- and immunotherapy by Galectin-1 intranasal knock-down strategy. <i>Scientific Reports</i> , 2017, 7, 1217.	1.6	105
60	Role of pericytes in vascular morphogenesis. , 2005, , 115-125.		103
61	Laminin-Binding Integrins Induce Dll4 Expression and Notch Signaling in Endothelial Cells. <i>Circulation Research</i> , 2011, 109, 172-182.	2.0	101
62	A truncation allele in <i>vascular endothelial growth factor c</i> reveals distinct modes of signaling during lymphatic and vascular development. <i>Development (Cambridge)</i> , 2013, 140, 1497-1506.	1.2	98
63	Mouse Cutaneous Melanoma Induced by Mutant BRaf Arises from Expansion and Dedifferentiation of Mature Pigmented Melanocytes. <i>Cell Stem Cell</i> , 2017, 21, 679-693.e6.	5.2	93
64	Computer simulations reveal complex distribution of haemodynamic forces in a mouse retina model of angiogenesis. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140543.	1.5	87
65	Formin-Mediated Actin Polymerization at Endothelial Junctions Is Required for Vessel Lumen Formation and Stabilization. <i>Developmental Cell</i> , 2015, 32, 123-132.	3.1	87
66	Ultrastructural localization of adhesion molecules in the healthy. <i>Cell and Tissue Research</i> , 1999, 296, 259-269.	1.5	86
67	PTEN mediates Notch-dependent stalk cell arrest in angiogenesis. <i>Nature Communications</i> , 2015, 6, 7935.	5.8	86
68	Primary cilia sensitize endothelial cells to BMP and prevent excessive vascular regression. <i>Journal of Cell Biology</i> , 2018, 217, 1651-1665.	2.3	84
69	How do endothelial cells orientate?. , 2005, , 3-15.		72
70	Glioma-derived galectin-1 regulates innate and adaptive antitumor immunity. <i>International Journal of Cancer</i> , 2014, 134, 873-884.	2.3	71
71	Endothelial development taking shape. <i>Current Opinion in Cell Biology</i> , 2011, 23, 676-85.	2.6	70
72	Astrocyte-derived Wnt growth factors are required for endothelial blood-brain barrier maintenance. <i>Progress in Neurobiology</i> , 2021, 199, 101937.	2.8	68

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73	Imaging Transient Blood Vessel Fusion Events in Zebrafish by Correlative Volume Electron Microscopy. <i>PLoS ONE</i> , 2009, 4, e7716.	1.1	61
74	SRF selectively controls tip cell invasive behavior in angiogenesis. <i>Development (Cambridge)</i> , 2013, 140, 2321-2333.	1.2	59
75	A reversible haploid mouse embryonic stem cell biobank resource for functional genomics. <i>Nature</i> , 2017, 550, 114-118.	13.7	58
76	Role of platelet-derived growth factor in mesangium development and vasculopathies: lessons from platelet-derived growth factor and platelet-derived growth factor receptor mutations in mice. <i>Current Opinion in Nephrology and Hypertension</i> , 2004, 13, 45-52.	1.0	57
77	Hold Me, but Not Too Tight—Endothelial Cell—Cell Junctions in Angiogenesis. <i>Cold Spring Harbor Perspectives in Biology</i> , 2018, 10, a029223.	2.3	57
78	Inhibition of the p110 β isoform of PI 3-kinase stimulates nonfunctional tumor angiogenesis. <i>Journal of Experimental Medicine</i> , 2013, 210, 1937-1945.	4.2	56
79	Dynamic stroma reorganization drives blood vessel dysmorphia during glioma growth. <i>EMBO Molecular Medicine</i> , 2017, 9, 1629-1645.	3.3	54
80	Endothelial cell rearrangements during vascular patterning require PI3-kinase-mediated inhibition of actomyosin contractility. <i>Nature Communications</i> , 2018, 9, 4826.	5.8	53
81	Dendritic cell expression of the Notch ligand <i>jagged2</i> is not essential for Th2 response induction <i>in vivo</i> . <i>European Journal of Immunology</i> , 2008, 38, 1043-1049.	1.6	50
82	Blood vessels on a chip. <i>Nature</i> , 2012, 488, 465-466.	13.7	48
83	Endothelial Cell Orientation and Polarity Are Controlled by Shear Stress and VEGF Through Distinct Signaling Pathways. <i>Frontiers in Physiology</i> , 2020, 11, 623769.	1.3	47
84	The Pecten Oculi of the Chicken: A Model System for Vascular Differentiation and Barrier Maturation. <i>International Review of Cytology</i> , 1999, 187, 111-159.	6.2	45
85	Crim1 maintains retinal vascular stability during development by regulating endothelial cell Vegfa autocrine signaling. <i>Development (Cambridge)</i> , 2014, 141, 448-459.	1.2	44
86	Endothelial Alpha-Parvin Controls Integrity of Developing Vasculature and Is Required for Maintenance of Cell—Cell Junctions. <i>Circulation Research</i> , 2015, 117, 29-40.	2.0	44
87	PP2A regulatory subunit B β controls endothelial contractility and vessel lumen integrity via regulation of HDAC7. <i>EMBO Journal</i> , 2013, 32, 2491-2503.	3.5	43
88	Differential expression of endothelial β -catenin and plakoglobin during development and maturation of the blood-brain and blood-retina barrier in the chicken. <i>Developmental Dynamics</i> , 2000, 217, 86-98.	0.8	41
89	Artery-vein specification in the zebrafish trunk is pre-patterned by heterogeneous Notch activity and balanced by flow-mediated fine tuning. <i>Development (Cambridge)</i> , 2019, 146, .	1.2	41
90	Knockout of the PKN Family of Rho Effector Kinases Reveals a Non-redundant Role for PKN2 in Developmental Mesoderm Expansion. <i>Cell Reports</i> , 2016, 14, 440-448.	2.9	40

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91	Pericytes or Mesenchymal Stem Cells: Is That the Question?. <i>Cell Stem Cell</i> , 2017, 20, 296-297.	5.2	38
92	Peripheral mural cell recruitment requires cell-autonomous heparan sulfate. <i>Blood</i> , 2009, 114, 915-924.	0.6	37
93	The pecten oculi of the chicken as a new in vivo model of the blood-brain barrier. <i>Cell and Tissue Research</i> , 1996, 285, 91-100.	1.5	36
94	Maturation of the blood-retina barrier in the developing pecten oculi of the chicken. <i>Developmental Brain Research</i> , 1997, 100, 205-219.	2.1	35
95	Visualization of Endothelial Actin Cytoskeleton in the Mouse Retina. <i>PLoS ONE</i> , 2012, 7, e47488.	1.1	34
96	PAR-3 controls endothelial planar polarity and vascular inflammation under laminar flow. <i>EMBO Reports</i> , 2018, 19, .	2.0	34
97	Lack of CCM1 induces hypersprouting and impairs response to flow. <i>Human Molecular Genetics</i> , 2014, 23, 6223-6234.	1.4	32
98	Unique vascular phenotypes following over-expression of individual VEGFA isoforms from the developing lens. <i>Angiogenesis</i> , 2006, 9, 209-224.	3.7	30
99	Growth Factor Gradients in Vascular Patterning. <i>Novartis Foundation Symposium</i> , 2007, 283, 194-206.	1.2	30
100	Therapeutic antibodies targeting angiotensin II inhibit angiogenesis in vivo. <i>FASEB Journal</i> , 2008, 22, 880-889.	0.2	30
101	cAMP-dependent protein kinase A (PKA) regulates angiogenesis by modulating tip cell behavior in a Notch-independent manner. <i>Development (Cambridge)</i> , 2016, 143, 3582-3590.	1.2	29
102	PolNet: A Tool to Quantify Network-Level Cell Polarity and Blood Flow in Vascular Remodeling. <i>Biophysical Journal</i> , 2018, 114, 2052-2058.	0.2	29
103	Endothelial PKA activity regulates angiogenesis by limiting autophagy through phosphorylation of ATG16L1. <i>ELife</i> , 2019, 8, .	2.8	25
104	The peripapillary glia of the optic nerve head in the chicken retina. <i>The Anatomical Record</i> , 2000, 259, 263-275.	2.3	23
105	Opposite Macrophage Polarization in Different Subsets of Ovarian Cancer: Observation from a Pilot Study. <i>Cells</i> , 2020, 9, 305.	1.8	22
106	Association between erythrocyte dynamics and vessel remodelling in developmental vascular networks. <i>Journal of the Royal Society Interface</i> , 2021, 18, 20210113.	1.5	20
107	A YAP/TAZ-TEAD signalling module links endothelial nutrient acquisition to angiogenic growth. <i>Nature Metabolism</i> , 2022, 4, 672-682.	5.1	20
108	Intravital imaging reveals conversion between distinct tumor vascular morphologies and localized vascular response to Sunitinib. <i>Intravital</i> , 2013, 2, e24790.	2.0	18

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109	Remodeling of an <i>in vitro</i> microvessel exposed to cyclic mechanical stretch. <i>APL Bioengineering</i> , 2021, 5, 026102.	3.3	17
110	R- and B-cadherin expression defines subpopulations of glial cells involved in axonal guidance in the optic nerve head of the chicken. <i>Glia</i> , 2000, 31, 131-143.	2.5	16
111	Cyclic <i>Nrarp</i> mRNA expression is regulated by the somitic oscillator but <i>Nrarp</i> protein levels do not oscillate. <i>Developmental Dynamics</i> , 2009, 238, 3043-3055.	0.8	16
112	Endothelial Calcineurin Signaling Restrains Metastatic Outgrowth by Regulating <i>Bmp2</i> . <i>Cell Reports</i> , 2019, 26, 1227-1241.e6.	2.9	15
113	Differentiation of a unique macroglial cell type in the pecten oculi of the chicken. , 1999, 28, 201-214.		12
114	Lymphoma Angiogenesis Is Orchestrated by Noncanonical Signaling Pathways. <i>Cancer Research</i> , 2020, 80, 1316-1329.	0.4	12
115	VEGF and Endothelial Guidance in Angiogenic Sprouting. , 2008, , 68-78.		11
116	N-CAM Exhibits a Regulatory Function in Pathological Angiogenesis in Oxygen Induced Retinopathy. <i>PLoS ONE</i> , 2011, 6, e26026.	1.1	10
117	GPIHBP1 expression in gliomas promotes utilization of lipoprotein-derived nutrients. <i>ELife</i> , 2019, 8, .	2.8	10
118	WASp controls oriented migration of endothelial cells to achieve functional vascular patterning. <i>Development (Cambridge)</i> , 2022, 149, .	1.2	10
119	Tissue guidance without filopodia. <i>Communicative and Integrative Biology</i> , 2014, 7, e28820.	0.6	9
120	NanoSIMS imaging reveals unexpected heterogeneity in nutrient uptake by brown adipocytes. <i>Biochemical and Biophysical Research Communications</i> , 2018, 504, 899-902.	1.0	8
121	Blood flow boosts BMP signaling to keep vessels in shape. <i>Journal of Cell Biology</i> , 2016, 214, 793-795.	2.3	7
122	Morph or Move? How Distinct Endothelial Cell Responses to Blood Flow Shape Vascular Networks. <i>Developmental Cell</i> , 2017, 41, 574-576.	3.1	7
123	On the preservation of vessel bifurcations during flow-mediated angiogenic remodelling. <i>PLoS Computational Biology</i> , 2021, 17, e1007715.	1.5	6
124	Imaging Glioma Progression by Intravital Microscopy. <i>Methods in Molecular Biology</i> , 2019, 1862, 227-243.	0.4	5
125	Formation and Maintenance of the Natural Bypass Vessels of the Brain. <i>Frontiers in Cardiovascular Medicine</i> , 2022, 9, 778773.	1.1	5
126	ATTRACT. <i>Circulation Research</i> , 2019, 125, 262-264.	2.0	4

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127	Long-lived tumor-associated macrophages in glioma. <i>Neuro-Oncology Advances</i> , 2020, 2, vdaa127.	0.4	4
128	Vasohibin 1 selectively regulates secondary sprouting and lymphangiogenesis in the zebrafish trunk. <i>Development (Cambridge)</i> , 2021, 148, .	1.2	4
129	Svep1 stabilises developmental vascular anastomosis in reduced flow conditions. <i>Development (Cambridge)</i> , 2022, 149, .	1.2	4
130	A backward-mode optical-resolution photoacoustic microscope for 3D imaging using a planar Fabry-Pérot sensor. <i>Photoacoustics</i> , 2021, 24, 100293.	4.4	2
131	Imaging of Endothelial Cell Dynamic Behavior in Zebrafish. <i>Methods in Molecular Biology</i> , 2018, 1846, 181-195.	0.4	1
132	Blood flow meets mitophagy. <i>Journal of Cell Biology</i> , 2022, 221, .	2.3	1
133	Intron with transgenic marker (InTraM) facilitates high-throughput screening of endogenous gene reporter lines. <i>Genesis</i> , 2020, 58, e23391.	0.8	0
134	Endothelial guidance in vascular patterning. <i>FASEB Journal</i> , 2007, 21, A133.	0.2	0
135	Endothelial Tip Cell Guidance and Mechanisms. <i>FASEB Journal</i> , 2010, 24, 9.1.	0.2	0