Holger Gerhardt

List of Publications by Year
in descending order

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135 papers	26,853 citations	13865 67 h-index	12946 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. Journal of Cell Biology, 2003, 161, 1163-1177.	5.2	2,483
2	Basic and Therapeutic Aspects of Angiogenesis. Cell, 2011, 146, 873-887.	28.9	2,263
3	Dll4 signalling through Notch1 regulates formation of tip cells during angiogenesis. Nature, 2007, 445, 776-780.	27.8	1,515
4	Role of PFKFB3-Driven Glycolysis in Vessel Sprouting. Cell, 2013, 154, 651-663.	28.9	1,117
5	Lack of Pericytes Leads to Endothelial Hyperplasia and Abnormal Vascular Morphogenesis. Journal of Cell Biology, 2001, 153, 543-554.	5.2	949
6	Endothelial-pericyte interactions in angiogenesis. Cell and Tissue Research, 2003, 314, 15-23.	2.9	931
7	Endothelial cells dynamically compete for the tip cell position during angiogenic sprouting. Nature Cell Biology, 2010, 12, 943-953.	10.3	820
8	Spatially restricted patterning cues provided by heparin-binding VEGF-A control blood vessel branching morphogenesis. Genes and Development, 2002, 16, 2684-2698.	5.9	779
9	Angiogenesis: A Team Effort Coordinated by Notch. Developmental Cell, 2009, 16, 196-208.	7.0	707
10	Wnt/Î²-catenin signaling controls development of the bloodâ€“brain barrier. Journal of Cell Biology, 2008, 183, 409-417.	5.2	680
11	Endothelial PDGF-B retention is required for proper investment of pericytes in the microvessel wall. Genes and Development, 2003, 17, 1835-1840.	5.9	557
12	VEGF and Notch in Tip and Stalk Cell Selection. Cold Spring Harbor Perspectives in Medicine, 2013, 3, a006569-a006569.	6.2	484
13	Fatty acid carbon is essential for dNTP synthesis in endothelial cells. Nature, 2015, 520, 192-197.	27.8	466
14	Angiogenesis selectively requires the p110Î± isoform of PI3K to control endothelial cell migration. Nature, 2008, 453, 662-666.	27.8	459
15	A New Method for Large Scale Isolation of Kidney Glomeruli from Mice. American Journal of Pathology, 2002, 161, 799-805.	3.8	457
16	FOXO1 couples metabolic activity and growth state in the vascular endothelium. Nature, 2016, 529, 216-220.	27.8	438
17	Partial and Transient Reduction of Glycolysis by PFKFB3 Blockade Reduces Pathological Angiogenesis. Cell Metabolism, 2014, 19, 37-48.	16.2	429
18	Tumor Vessel Normalization by Chloroquine Independent of Autophagy. Cancer Cell, 2014, 26, 190-206.	16.8	358

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19	Acetylation-dependent regulation of endothelial Notch signalling by the SIRT1 deacetylase. Nature, 2011, 473, 234-238.	27.8	350
20	Robo4 stabilizes the vascular network by inhibiting pathologic angiogenesis and endothelial hyperpermeability. Nature Medicine, 2008, 14, 448-453.	30.7	346
21	Endothelium-specific platelet-derived growth factor-B ablation mimics diabetic retinopathy. EMBO Journal, 2002, 21, 4307-4316.	7.8	339
22	The role of differential VE-cadherin dynamics in cell rearrangement during angiogenesis. Nature Cell Biology, 2014, 16, 309-321.	10.3	328
23	Nrarp Coordinates Endothelial Notch and Wnt Signaling to Control Vessel Density in Angiogenesis. Developmental Cell, 2009, 16, 70-82.	7.0	326
24	Coordinating cell behaviour during blood vessel formation. Development (Cambridge), 2011, 138, 4569-4583.	2.5	313
25	Pericytes limit tumor cell metastasis. Journal of Clinical Investigation, 2006, 116, 642-651.	8.2	294
26	VEGFR-3 controls tip to stalk conversion at vessel fusion sites by reinforcing Notch signalling. Nature Cell Biology, 2011, 13, 1202-1213.	10.3	272
27	Regulation of angiogenesis by a non-canonical Wntâ€“Flt1 pathway in myeloid cells. Nature, 2011, 474, 511-515.	27.8	244
28	Cortical and retinal defects caused by dosage-dependent reductions in VEGF-A paracrine signaling. Developmental Biology, 2003, 262, 225-241.	2.0	243
29	Neuropilinâ€1 is required for endothelial tip cell guidance in the developing central nervous system. Developmental Dynamics, 2004, 231, 503-509.	1.8	243
30	VEGF and endothelial guidance in angiogenic sprouting. Organogenesis, 2008, 4, 241-246.	1.2	237
31	Agent-based simulation of notch-mediated tip cell selection in angiogenic sprout initialisation. Journal of Theoretical Biology, 2008, 250, 25-36.	1.7	234
32	N-cadherin mediates pericytic-endothelial interaction during brain angiogenesis in the chicken. Developmental Dynamics, 2000, 218, 472-479.	1.8	231
33	Dynamic Endothelial Cell Rearrangements Drive Developmental Vessel Regression. PLoS Biology, 2015, 13, e1002125.	5.6	231
34	Integrin signalling regulates YAP/TAZ to control skin homeostasis. Development (Cambridge), 2016, 143, 1674-87.	2.5	228
35	Endothelial cell O-glycan deficiency causes blood/lymphatic misconnections and consequent fatty liver disease in mice. Journal of Clinical Investigation, 2008, 118, 3725-3737.	8.2	216
36	A Two-Way Communication between Microglial Cells and Angiogenic Sprouts Regulates Angiogenesis in Aortic Ring Cultures. PLoS ONE, 2011, 6, e15846.	2.5	200

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37	Tumour ischaemia by interferon-Î³ resembles physiological blood vessel regression. Nature, 2017, 545, 98-102.	27.8	199
38	The Endothelial Transcription Factor ERG Promotes Vascular Stability and Growth through Wnt/Î²-Catenin Signaling. Developmental Cell, 2015, 32, 82-96.	7.0	190
39	Tipping the Balance: Robustness of Tip Cell Selection, Migration and Fusion in Angiogenesis. PLoS Computational Biology, 2009, 5, e1000549.	3.2	187
40	YAP and TAZ regulate adherens junction dynamics and endothelial cell distribution during vascular development. ELife, 2018, 7, .	6.0	186
41	Filopodia are dispensable for endothelial tip cell guidance. Development (Cambridge), 2013, 140, 4031-4040.	2.5	178
42	Defective Associations between Blood Vessels and Brain Parenchyma Lead to Cerebral Hemorrhage in Mice Lacking Î±v Integrins. Molecular and Cellular Biology, 2002, 22, 7667-7677.	2.3	162
43	Blood flow drives lumen formation by inverse membrane blebbing during angiogenesis inÂvivo. Nature Cell Biology, 2016, 18, 443-450.	10.3	159
44	Defective N-sulfation of heparan sulfate proteoglycans limits PDGF-BB binding and pericyte recruitment in vascular development. Genes and Development, 2007, 21, 316-331.	5.9	157
45	Alk1 and Alk5 inhibition by Nrp1 controls vascular sprouting downstream of Notch. Nature Communications, 2015, 6, 7264.	12.8	143
46	Pericytes: gatekeepers in tumour cell metastasis?. Journal of Molecular Medicine, 2008, 86, 135-144.	3.9	142
47	VEGFRs and Notch: a dynamic collaboration in vascular patterning. Biochemical Society Transactions, 2009, 37, 1233-1236.	3.4	140
48	Wiring the Vascular Network with Neural Cues: A CNS Perspective. Neuron, 2015, 87, 271-296.	8.1	140
49	VEGF and Notch Signaling. Cell Adhesion and Migration, 2007, 1, 133-136.	2.7	139
50	Glycolytic regulation of cell rearrangement in angiogenesis. Nature Communications, 2016, 7, 12240.	12.8	131
51	Endothelial basement membrane limits tip cell formation by inducing Dll4/Notch signalling in vivo. EMBO Reports, 2011, 12, 1135-1143.	4.5	129
52	Non-canonical Wnt signalling modulates the endothelial shear stress flow sensor in vascular remodelling. ELife, 2016, 5, e07727.	6.0	125
53	Development of siRNA-loaded chitosan nanoparticles targeting Galectin-1 for the treatment of glioblastoma multiforme via intranasal administration. Journal of Controlled Release, 2016, 227, 71-81.	9.9	123
54	Vascular morphogenesis: a Wnt for every vessel?. Current Opinion in Genetics and Development, 2009, 19, 476-483.	3.3	120

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55	Role of Delta-like-4/Notch in the Formation and Wiring of the Lymphatic Network in Zebrafish. Arteriosclerosis, Thrombosis, and Vascular Biology, 2010, 30, 1695-1702.	2.4	118
56	Integrin-dependent and -independent functions of astrocytic fibronectin in retinal angiogenesis. Development (Cambridge), 2011, 138, 4451-4463.	2.5	116
57	Synchronization of endothelial Dll4-Notch dynamics switch blood vessels from branching to expansion. ELife, 2016, 5, .	6.0	115
58	Quantitative assessment of angiogenesis, perfused blood vessels and endothelial tip cells in the postnatal mouse brain. Nature Protocols, 2015, 10, 53-74.	12.0	105
59	Sensitization of glioblastoma tumor micro-environment to chemo- and immunotherapy by Galectin-1 intranasal knock-down strategy. Scientific Reports, 2017, 7, 1217.	3.3	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. Circulation Research, 2011, 109, 172-182.	4.5	101
62	A truncation allele in vascular endothelial growth factor c reveals distinct modes of signaling during lymphatic and vascular development. Development (Cambridge), 2013, 140, 1497-1506.	2.5	98
63	Mouse Cutaneous Melanoma Induced by Mutant BRaf Arises from Expansion and Dedifferentiation of Mature Pigmented Melanocytes. Cell Stem Cell, 2017, 21, 679-693.e6.	11.1	93
64	Computer simulations reveal complex distribution of haemodynamic forces in a mouse retina model of angiogenesis. Journal of the Royal Society Interface, 2014, 11, 20140543.	3.4	87
65	Formin-Mediated Actin Polymerization at Endothelial Junctions Is Required for Vessel Lumen Formation and Stabilization. Developmental Cell, 2015, 32, 123-132.	7.0	87
66	Ultrastructural localization of adhesion molecules in the healthy. Cell and Tissue Research, 1999, 296, 259-269.	2.9	86
67	PTEN mediates Notch-dependent stalk cell arrest in angiogenesis. Nature Communications, 2015, 6, 7935.	12.8	86
68	Primary cilia sensitize endothelial cells to BMP and prevent excessive vascular regression. Journal of Cell Biology, 2018, 217, 1651-1665.	5.2	84
69	How do endothelial cells orientate?. , 2005, , 3-15.		72
70	Gliomaâ€derived galectinâ€1 regulates innate and adaptive antitumor immunity. International Journal of Cancer, 2014, 134, 873-884.	5.1	71
71	Endothelial development taking shape. Current Opinion in Cell Biology, 2011, 23, 676-85.	5.4	70
72	Astrocyte-derived Wnt growth factors are required for endothelial blood-brain barrier maintenance. Progress in Neurobiology, 2021, 199, 101937.	5.7	68

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73	Imaging Transient Blood Vessel Fusion Events in Zebrafish by Correlative Volume Electron Microscopy. PLoS ONE, 2009, 4, e7716.	2.5	61
74	SRF selectively controls tip cell invasive behavior in angiogenesis. Development (Cambridge), 2013, 140, 2321-2333.	2.5	59
75	A reversible haploid mouse embryonic stem cell biobank resource for functional genomics. Nature, 2017, 550, 114-118.	27.8	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. Current Opinion in Nephrology and Hypertension, 2004, 13, 45-52.	2.0	57
77	Hold Me, but Not Too Tightâ€"Endothelial Cellâ€"Cell Junctions in Angiogenesis. Cold Spring Harbor Perspectives in Biology, 2018, 10, a029223.	5.5	57
78	Inhibition of the p110Î± isoform of PI 3-kinase stimulates nonfunctional tumor angiogenesis. Journal of Experimental Medicine, 2013, 210, 1937-1945.	8.5	56
79	Dynamic stroma reorganization drives blood vessel dysmorphia during glioma growth. EMBO Molecular Medicine, 2017, 9, 1629-1645.	6.9	54
80	Endothelial cell rearrangements during vascular patterning require PI3-kinase-mediated inhibition of actomyosin contractility. Nature Communications, 2018, 9, 4826.	12.8	53
81	Dendritic cell expression of the Notch ligand jagged2 is not essential for Th2 response induction in vivo. European Journal of Immunology, 2008, 38, 1043-1049.	2.9	50
82	Blood vessels on a chip. Nature, 2012, 488, 465-466.	27.8	48
83	Endothelial Cell Orientation and Polarity Are Controlled by Shear Stress and VEGF Through Distinct Signaling Pathways. Frontiers in Physiology, 2020, 11, 623769.	2.8	47
84	The Pecten Oculi of the Chicken: A Model System for Vascular Differentiation and Barrier Maturation. International Review of Cytology, 1999, 187, 111-159.	6.2	45
85	Crim1 maintains retinal vascular stability during development by regulating endothelial cell Vegfa autocrine signaling. Development (Cambridge), 2014, 141, 448-459.	2.5	44
86	Endothelial Alpha-Parvin Controls Integrity of Developing Vasculature and Is Required for Maintenance of Cellâ€"Cell Junctions. Circulation Research, 2015, 117, 29-40.	4.5	44
87	PP2A regulatory subunit BÎ± controls endothelial contractility and vessel lumen integrity via regulation of HDAC7. EMBO Journal, 2013, 32, 2491-2503.	7.8	43
88	Differential expression of endothelial ?-catenin and plakoglobin during development and maturation of the blood-brain and blood-retina barrier in the chicken. Developmental Dynamics, 2000, 217, 86-98.	1.8	41
89	Artery-vein specification in the zebrafish trunk is pre-patterned by heterogeneous Notch activity and balanced by flow-mediated fine tuning. Development (Cambridge), 2019, 146, .	2.5	41
90	Knockout of the PKN Family of Rho Effector Kinases Reveals a Non-redundant Role for PKN2 in Developmental Mesoderm Expansion. Cell Reports, 2016, 14, 440-448.	6.4	40

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91	Pericytes or Mesenchymal Stem Cells: Is That the Question?. Cell Stem Cell, 2017, 20, 296-297.	11.1	38
92	Peripheral mural cell recruitment requires cell-autonomous heparan sulfate. Blood, 2009, 114, 915-924.	1.4	37
93	The pecten oculi of the chicken as a new in vivo model of the blood-brain barrier. Cell and Tissue Research, 1996, 285, 91-100.	2.9	36
94	Maturation of the bloodâ€“retina barrier in the developing pecten oculi of the chicken. Developmental Brain Research, 1997, 100, 205-219.	1.7	35
95	Visualization of Endothelial Actin Cytoskeleton in the Mouse Retina. PLoS ONE, 2012, 7, e47488.	2.5	34
96	<scp>PAR</scp> â€ controls endothelial planar polarity and vascular inflammation under laminar flow. EMBO Reports, 2018, 19, .	4.5	34
97	Lack of CCM1 induces hypersprouting and impairs response to flow. Human Molecular Genetics, 2014, 23, 6223-6234.	2.9	32
98	Unique vascular phenotypes following over-expression of individual VEGFA isoforms from the developing lens. Angiogenesis, 2006, 9, 209-224.	7.2	30
99	Growth Factor Gradients in Vascular Patterning. Novartis Foundation Symposium, 2007, 283, 194-206.	1.1	30
100	Therapeutic antibodies targeting angiomotin inhibit angiogenesis in vivo. FASEB Journal, 2008, 22, 880-889.	0.5	30
101	cAMP-dependent protein kinase A (PKA) regulates angiogenesis by modulating tip cell behavior in a Notch-independent manner. Development (Cambridge), 2016, 143, 3582-3590.	2.5	29
102	PolNet: A Tool to Quantify Network-Level Cell Polarity and Blood Flow in Vascular Remodeling. Biophysical Journal, 2018, 114, 2052-2058.	0.5	29
103	Endothelial PKA activity regulates angiogenesis by limiting autophagy through phosphorylation of ATG16L1. ELife, 2019, 8, .	6.0	25
104	The peripapillary glia of the optic nerve head in the chicken retina. The Anatomical Record, 2000, 259, 263-275.	1.8	23
105	Opposite Macrophage Polarization in Different Subsets of Ovarian Cancer: Observation from a Pilot Study. Cells, 2020, 9, 305.	4.1	22
106	Association between erythrocyte dynamics and vessel remodelling in developmental vascular networks. Journal of the Royal Society Interface, 2021, 18, 20210113.	3.4	20
107	A YAP/TAZ-TEAD signalling module links endothelial nutrient acquisition to angiogenic growth. Nature Metabolism, 2022, 4, 672-682.	11.9	20
108	Intravital imaging reveals conversion between distinct tumor vascular morphologies and localized vascular response to Sunitinib. Intravital, 2013, 2, e24790.	2.0	18

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109	Remodeling of an in vitro microvessel exposed to cyclic mechanical stretch. APL Bioengineering, 2021, 5, 026102.	6.2	17
110	R- and B-cadherin expression defines subpopulations of glial cells involved in axonal guidance in the optic nerve head of the chicken. Glia, 2000, 31, 131-143.	4.9	16
111	Cyclic Nrarp mRNA expression is regulated by the somitic oscillator but Nrarp protein levels do not oscillate. Developmental Dynamics, 2009, 238, 3043-3055.	1.8	16
112	Endothelial Calcineurin Signaling Restrains Metastatic Outgrowth by Regulating Bmp2. Cell Reports, 2019, 26, 1227-1241.e6.	6.4	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. Cancer Research, 2020, 80, 1316-1329.	0.9	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. PLoS ONE, 2011, 6, e26026.	2.5	10
117	GPIHBP1 expression in gliomas promotes utilization of lipoprotein-derived nutrients. ELife, 2019, 8, .	6.0	10
118	WASp controls oriented migration of endothelial cells to achieve functional vascular patterning. Development (Cambridge), 2022, 149, .	2.5	10
119	Tissue guidance without filopodia. Communicative and Integrative Biology, 2014, 7, e28820.	1.4	9
120	NanoSIMS imaging reveals unexpected heterogeneity in nutrient uptake by brown adipocytes. Biochemical and Biophysical Research Communications, 2018, 504, 899-902.	2.1	8
121	Blood flow boosts BMP signaling to keep vessels in shape. Journal of Cell Biology, 2016, 214, 793-795.	5.2	7
122	Morph or Move? How Distinct Endothelial Cell Responses to Blood Flow Shape Vascular Networks. Developmental Cell, 2017, 41, 574-576.	7.0	7
123	On the preservation of vessel bifurcations during flow-mediated angiogenic remodelling. PLoS Computational Biology, 2021, 17, e1007715.	3.2	6
124	Imaging Glioma Progression by Intravital Microscopy. Methods in Molecular Biology, 2019, 1862, 227-243.	0.9	5
125	Formation and Maintenance of the Natural Bypass Vessels of the Brain. Frontiers in Cardiovascular Medicine, 2022, 9, 778773.	2.4	5
126	ATTRACT. Circulation Research, 2019, 125, 262-264.	4.5	4

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127	Long-lived tumor-associated macrophages in glioma. Neuro-Oncology Advances, 2020, 2, vdaa127.	0.7	4
128	Vasohibin 1 selectively regulates secondary sprouting and lymphangiogenesis in the zebrafish trunk. Development (Cambridge), 2021, 148, .	2.5	4
129	Svep1 stabilises developmental vascular anastomosis in reduced flow conditions. Development (Cambridge), 2022, 149, .	2.5	4
130	A backward-mode optical-resolution photoacoustic microscope for 3D imaging using a planar Fabry-PÃ©rot sensor. Photoacoustics, 2021, 24, 100293.	7.8	2
131	Imaging of Endothelial Cell Dynamic Behavior in Zebrafish. Methods in Molecular Biology, 2018, 1846, 181-195.	0.9	1
132	Blood flow meets mitophagy. Journal of Cell Biology, 2022, 221, .	5.2	1
133	Intron with transgenic marker (InTraM) facilitates highâ€throughput screening of endogenous gene reporter lines. Genesis, 2020, 58, e23391.	1.6	0
134	Endothelial guidance in vascular patterning. FASEB Journal, 2007, 21, A133.	0.5	0
135	Endothelial Tip Cell Guidance and Mechanisms. FASEB Journal, 2010, 24, 9.1.	0.5	0