Matthias Hebrok

List of Publications by Citations

115 papers	12,012 citations	57 h-index	109 g-index
127 ext. papers	13,693 ext. citations	12.2 avg, IF	6.33 L-index

#	Paper	IF	Citations
115	Hedgehog is an early and late mediator of pancreatic cancer tumorigenesis. *Nature*, **2003**, 425, 851-6	50.4	1280
114	Hedgehog signalling in cancer formation and maintenance. *Nature Reviews Cancer*, **2003**, 3, 903-11	31.3	705
113	Incomplete DNA methylation underlies a transcriptional memory of somatic cells in human iPS cells. *Nature Cell Biology*, **2011**, 13, 541-9	23.4	442
112	KRAS, Hedgehog, Wnt and the twisted developmental biology of pancreatic ductal adenocarcinoma. *Nature Reviews Cancer*, **2010**, 10, 683-95	31.3	431
111	Identification of Sox9-dependent acinar-to-ductal reprogramming as the principal mechanism for initiation of pancreatic ductal adenocarcinoma. *Cancer Cell*, **2012**, 22, 737-50	24.3	417
110	Stat3 and MMP7 contribute to pancreatic ductal adenocarcinoma initiation and progression. *Cancer Cell*, **2011**, 19, 441-55	24.3	396
109	Controlled induction of human pancreatic progenitors produces functional beta-like cells in vitro. *EMBO Journal*, **2015**, 34, 1759-72	13	361
108	Genotype tunes pancreatic ductal adenocarcinoma tissue tension to induce matricellular fibrosis and tumor progression. *Nature Medicine*, **2016**, 22, 497-505	50.5	338
107	GLI1 is regulated through Smoothened-independent mechanisms in neoplastic pancreatic ducts and mediates PDAC cell survival and transformation. *Genes and Development*, **2009**, 23, 24-36	12.6	309
106	Wnt signaling regulates pancreatic beta cell proliferation. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 6247-52	11.5	279
105	Beta-catenin blocks Kras-dependent reprogramming of acini into pancreatic cancer precursor lesions in mice. *Journal of Clinical Investigation*, **2010**, 120, 508-20	15.9	259
104	Hedgehog/Ras interactions regulate early stages of pancreatic cancer. *Genes and Development*, **2006**, 20, 3161-73	12.6	246
103	Human islets contain four distinct subtypes of □cells. *Nature Communications*, **2016**, 7, 11756	17.4	211
102	Liver-specific loss of beta-catenin blocks glutamine synthesis pathway activity and cytochrome p450 expression in mice. *Hepatology*, **2006**, 43, 817-25	11.2	194
101	Sonic hedgehog acts at multiple stages during pancreatic tumorigenesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 5103-8	11.5	192
100	Stabilization of beta-catenin impacts pancreas growth. *Development (Cambridge)*, **2006**, 133, 2023-32	6.6	186
99	Recapitulating endocrine cell clustering in culture promotes maturation of human stem-cell-derived □cells. *Nature Cell Biology*, **2019**, 21, 263-274	23.4	182

98	Common activation of canonical Wnt signaling in pancreatic adenocarcinoma. *PLoS ONE*, **2007**, 2, e1155	3.7	182
97	Probing cell type-specific functions of Gi in vivo identifies GPCR regulators of insulin secretion. *Journal of Clinical Investigation*, **2007**, 117, 4034-43	15.9	177
96	How does type 1 diabetes develop?: the notion of homicide or β-cell suicide revisited. *Diabetes*, **2011**, 60, 1370-9	0.9	163
95	Activin receptor patterning of foregut organogenesis. *Genes and Development*, **2000**, 14, 1866-1871	12.6	160
94	Disruption of Dicer1 induces dysregulated fetal gene expression and promotes hepatocarcinogenesis. *Gastroenterology*, **2009**, 136, 2304-2315.e1-4	13.3	150
93	M-twist is an inhibitor of muscle differentiation. *Developmental Biology*, **1994**, 165, 537-44	3.1	144
92	Extracellular sulfatases, elements of the Wnt signaling pathway, positively regulate growth and tumorigenicity of human pancreatic cancer cells. *PLoS ONE*, **2007**, 2, e392	3.7	144
91	Canonical wnt signaling is required for pancreatic carcinogenesis. *Cancer Research*, **2013**, 73, 4909-22	10.1	139
90	The chromatin regulator Brg1 suppresses formation of intraductal papillary mucinous neoplasm and pancreatic ductal adenocarcinoma. *Nature Cell Biology*, **2014**, 16, 255-67	23.4	136
89	Cellular plasticity within the pancreas--lessons learned from development. *Developmental Cell*, **2010**, 18, 342-56	10.2	130
88	Stabilization of beta-catenin induces pancreas tumor formation. *Gastroenterology*, **2008**, 135, 1288-300	13.3	126
87	Stem Cell Therapies for Treating Diabetes: Progress and Remaining Challenges. *Cell Stem Cell*, **2018**, 22, 810-823	18	125
86	Hedgehog signaling in pancreas development. *Mechanisms of Development*, **2003**, 120, 45-57	1.7	123
85	Wnt5a is essential for intestinal elongation in mice. *Developmental Biology*, **2009**, 326, 285-94	3.1	120
84	Liver-specific loss of beta-catenin results in delayed hepatocyte proliferation after partial hepatectomy. *Hepatology*, **2007**, 45, 361-8	11.2	113
83	Generation of functional thymic epithelium from human embryonic stem cells that supports host T cell development. *Cell Stem Cell*, **2013**, 13, 219-29	18	109
82	Primary cilia deletion in pancreatic epithelial cells results in cyst formation and pancreatitis. *Gastroenterology*, **2006**, 131, 1856-69	13.3	107
81	DNA methylation directs functional maturation of pancreatic β cells. *Journal of Clinical Investigation*, **2015**, 125, 2851-60	15.9	102

80	Pancreatic mesenchyme regulates epithelial organogenesis throughout development. *PLoS Biology* , **2011**, 9, e1001143	9.7	101
79	Brg1 promotes both tumor-suppressive and oncogenic activities at distinct stages of pancreatic cancer formation. *Genes and Development*, **2015**, 29, 658-71	12.6	100
78	Plasticity and dedifferentiation within the pancreas: development, homeostasis, and disease. *Cell Stem Cell*, **2015**, 16, 18-31	18	100
77	Control of cell identity in pancreas development and regeneration. *Gastroenterology*, **2013**, 144, 1170-9	13.3	100
76	Small molecules facilitate the reprogramming of mouse fibroblasts into pancreatic lineages. *Cell Stem Cell*, **2014**, 14, 228-36	18	98
75	Nr5a2 maintains acinar cell differentiation and constrains oncogenic Kras-mediated pancreatic neoplastic initiation. *Gut*, **2014**, 63, 656-64	19.2	97
74	Combined activities of hedgehog signaling inhibitors regulate pancreas development. *Development (Cambridge)*, **2003**, 130, 4871-9	6.6	97
73	M-twist expression inhibits mouse embryonic stem cell-derived myogenic differentiation in vitro. *Experimental Cell Research*, **1995**, 220, 92-100	4.2	89
72	Stem cells to pancreatic beta-cells: new sources for diabetes cell therapy. *Endocrine Reviews*, **2009**, 30, 214-27	27.2	86
71	Human pancreatic beta-like cells converted from fibroblasts. *Nature Communications*, **2016**, 7, 10080	17.4	81
70	Regulated beta-cell regeneration in the adult mouse pancreas. *Diabetes*, **2008**, 57, 958-66	0.9	80
69	Hedgehog signaling regulates expansion of pancreatic epithelial cells. *Developmental Biology*, **2005**, 280, 111-21	3.1	79
68	Replication confers β-cell immaturity. *Nature Communications*, **2018**, 9, 485	17.4	72
67	Dicer is required for proper liver zonation. *Journal of Pathology*, **2009**, 219, 365-72	9.4	72
66	Transcriptional analysis of pluripotency reveals the Hippo pathway as a barrier to reprogramming. *Human Molecular Genetics*, **2012**, 21, 2054-67	5.6	70
65	Islet formation in mice and men: lessons for the generation of functional insulin-producing β-cells from human pluripotent stem cells. *Current Opinion in Genetics and Development*, **2015**, 32, 171-80	4.9	69
64	A role for von Hippel-Lindau protein in pancreatic beta-cell function. *Diabetes*, **2009**, 58, 433-41	0.9	69
63	Dynamics of embryonic pancreas development using real-time imaging. *Developmental Biology*, **2007**, 306, 82-93	3.1	68

62	Antithetical NFATc1-Sox2 and p53-miR200 signaling networks govern pancreatic cancer cell plasticity. *EMBO Journal*, **2015**, 34, 517-30	13	63
61	PDX1 dynamically regulates pancreatic ductal adenocarcinoma initiation and maintenance. *Genes and Development*, **2016**, 30, 2669-2683	12.6	62
60	Life and death of β cells in Type 1 diabetes: A comprehensive review. *Journal of Autoimmunity*, **2016**, 71, 51-8	15.5	57
59	Repression of muscle-specific gene activation by the murine Twist protein. *Experimental Cell Research*, **1997**, 232, 295-303	4.2	57
58	Regulation of Cellular Identity in Cancer. *Developmental Cell*, **2015**, 35, 674-84	10.2	56
57	Nanoporous Immunoprotective Device for Stem-Cell-Derived β Cell Replacement Therapy. *ACS Nano*, **2017**, 11, 7747-7757	16.7	53
56	Dormant cancer cells contribute to residual disease in a model of reversible pancreatic cancer. *Cancer Research*, **2013**, 73, 1821-30	10.1	52
55	CDK1 inhibition targets the p53-NOXA-MCL1 axis, selectively kills embryonic stem cells, and prevents teratoma formation. *Stem Cell Reports*, **2015**, 4, 374-89	8	51
54	Dynamic switch of negative feedback regulation in Drosophila Akt-TOR signaling. *PLoS Genetics*, **2010**, 6, e1000990	6	51
53	Factors expressed by murine embryonic pancreatic mesenchyme enhance generation of insulin-producing cells from hESCs. *Diabetes*, **2013**, 62, 1581-92	0.9	50
52	Elevated Hedgehog/Gli signaling causes beta-cell dedifferentiation in mice. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 17010-5	11.5	50
51	Human stem cells from single blastomeres reveal pathways of embryonic or trophoblast fate specification. *Development (Cambridge)*, **2015**, 142, 4010-25	6.6	49
50	Synaptotagmin 4 Regulates Pancreatic β Cell Maturation by Modulating the Ca Sensitivity of Insulin Secretion Vesicles. *Developmental Cell*, **2018**, 45, 347-361.e5	10.2	48
49	mTORC1 to AMPK switching underlies β cell metabolic plasticity during maturation and diabetes. *Journal of Clinical Investigation*, **2019**, 129, 4124-4137	15.9	47
48	VHL-mediated disruption of Sox9 activity compromises β cell identity and results in diabetes mellitus. *Genes and Development*, **2013**, 27, 2563-75	12.6	46
47	Primary cilia regulate Gli/Hedgehog activation in pancreas. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 10109-14	11.5	45
46	All mixed up: defining roles for β cell subtypes in mature islets. *Genes and Development*, **2017**, 31, 228-240	12.6	43
45	Hedgehog signaling in pancreas epithelium regulates embryonic organ formation and adult beta-cell function. *Diabetes*, **2010**, 59, 1211-21	0.9	40

44	Pancreatic innervation in mouse development and beta-cell regeneration. *Neuroscience*, **2007**, 150, 592-602	3.3	39
43	Emerging routes to the generation of functional β cells for diabetes mellitus cell therapy. *Nature Reviews Endocrinology*, **2020**, 16, 506-518	15.2	37
42	Matrix metalloproteinases 2 and 9 are dispensable for pancreatic islet formation and function in vivo. *Diabetes*, **2005**, 54, 694-701	0.9	37
41	Using a barcoded AAV capsid library to select for clinically relevant gene therapy vectors. *JCI Insight* , **2019**, 4,	9.9	32
40	The BRG1/SOX9 axis is critical for acinar cell-derived pancreatic tumorigenesis. *Journal of Clinical Investigation*, **2018**, 128, 3475-3489	15.9	32
39	β Cell Insulin Secretion Requires the Ubiquitin Ligase COP1. *Cell*, **2015**, 163, 1457-67	56.2	31
38	Bmi1 is required for regeneration of the exocrine pancreas in mice. *Gastroenterology*, **2012**, 143, 821-831.e2	13.3	30
37	Mitigating Ischemic Injury of Stem Cell-Derived Insulin-Producing Cells after Transplant. *Stem Cell Reports*, **2017**, 9, 807-819	8	28
36	Generating β cells from stem cells-the story so far. *Cold Spring Harbor Perspectives in Medicine*, **2012** , 2, a007674	5.4	28
35	Global Protease Activity Profiling Provides Differential Diagnosis of Pancreatic Cysts. *Clinical Cancer Research*, **2017**, 23, 4865-4874	12.9	27
34	Brain meets pancreas: netrin, an axon guidance molecule, controls epithelial cell migration. *Trends in Cell Biology*, **2004**, 14, 153-5	18.3	27
33	Numb regulates acinar cell dedifferentiation and survival during pancreatic damage and acinar-to-ductal metaplasia. *Gastroenterology*, **2013**, 145, 1088-1097.e8	13.3	25
32	Aberrant innate immune activation following tissue injury impairs pancreatic regeneration. *PLoS ONE*, **2014**, 9, e102125	3.7	25
31	p120 Catenin Suppresses Basal Epithelial Cell Extrusion in Invasive Pancreatic Neoplasia. *Cancer Research*, **2016**, 76, 3351-63	10.1	23
30	Diabetic β Cells: To Be or Not To Be?. *Cell*, **2012**, 150, 1103-4	56.2	21
29	Development and Cancer: Lessons Learned in the Pancreas. *Cell Cycle*, **2004**, 3, 268-270	4.7	21
28	Rebranding asymptomatic type 1 diabetes: the case for autoimmune beta cell disorder as a pathological and diagnostic entity. *Diabetologia*, **2017**, 60, 35-38	10.3	20
27	Dicer regulates differentiation and viability during mouse pancreatic cancer initiation. *PLoS ONE*, **2014**, 9, e95486	3.7	20

26	Lipid Droplet Accumulation in Human Pancreatic Islets Is Dependent On Both Donor Age and Health. *Diabetes*, **2020**, 69, 342-354	0.9	18
25	Dynamic Proteomic Analysis of Pancreatic Mesenchyme Reveals Novel Factors That Enhance Human Embryonic Stem Cell to Pancreatic Cell Differentiation. *Stem Cells International*, **2016**, 2016, 6183562	5	18
24	Pancreatic pericytes originate from the embryonic pancreatic mesenchyme. *Developmental Biology*, **2019**, 449, 14-20	3.1	15
23	Loss of the transcription factor MAFB limits cell derivation from human PSCs. *Nature Communications*, **2020**, 11, 2742	17.4	15
22	Stem Cell-Based Clinical Trials for Diabetes Mellitus. *Frontiers in Endocrinology*, **2021**, 12, 631463	5.7	15
21	Elimination of von Hippel-Lindau function perturbs pancreas endocrine homeostasis in mice. *PLoS ONE*, **2013**, 8, e72213	3.7	9
20	The Pdx1-Bound Swi/Snf Chromatin Remodeling Complex Regulates Pancreatic Progenitor Cell Proliferation and Mature Islet Cell Function. *Diabetes*, **2019**, 68, 1806-1818	0.9	8
19	Single-cell transcriptome analysis defines heterogeneity of the murine pancreatic ductal tree. *ELife*, **2021**, 10,	8.9	7
18	Selective deletion of human leukocyte antigens protects stem cell-derived islets from immune rejection. *Cell Reports*, **2021**, 36, 109538	10.6	7
17	Mutations and variants of ONECUT1 in diabetes. *Nature Medicine*, **2021**, 27, 1928-1940	50.5	6
16	Loss of Pancreas upon Activated Wnt Signaling Is Concomitant with Emergence of Gastrointestinal Identity. *PLoS ONE*, **2016**, 11, e0164714	3.7	6
15	Atypical flat lesions derive from pancreatic acinar cells. *Pancreatology*, **2017**, 17, 350-353	3.8	5
14	LIN28B Impairs the Transition of hESC-Derived Cells from the Juvenile to Adult State. *Stem Cell Reports*, **2020**, 14, 9-20	8	5
13	Supporting Survival of Transplanted Stem-Cell-Derived Insulin-Producing Cells in an Encapsulation Device Augmented with Controlled Release of Amino Acids. *Advanced Biology*, **2019**, 3, 1900086	3.5	4
12	Taming the young and restless--epigenetic gene regulation in pancreas and beta-cell precursors. *EMBO Journal*, **2014**, 33, 2135-6	13	4
11	Diabetes. Solving human cell development--what does the mouse say?. *Nature Reviews Endocrinology*, **2014**, 10, 253-5	15.2	3
10	It's a free for all--insulin-positive cells join the group of potential progenitors for pancreatic ductal adenocarcinoma. *Cancer Cell*, **2009**, 16, 359-61	24.3	3
9	Designing Cells. *Cell Metabolism*, **2017**, 25, 223-224	24.6	2

8	Transcriptional changes and the role of ONECUT1 in hPSC pancreatic differentiation. *Communications Biology*, **2021**, 4, 1298	6.7	2
7	Rapid generation of functional mature pancreatic islet-beta cells from human pluripotent stem cells. *Protocol Exchange*,		2
6	SMARCA4 supports the oncogenic landscape of KRAS-driven lung tumors		2
5	Superporous agarose scaffolds for encapsulation of adult human islets and human stem-cell-derived cells for intravascular bioartificial pancreas applications. *Journal of Biomedical Materials Research - Part A*, **2021**, 109, 2438-2448	5.4	2
4	Development of the Endocrine Pancreas **2016**, 517-526.e5		1
3	Non-xenogeneic expansion and definitive endoderm differentiation of human pluripotent stem cells in an automated bioreactor. *Biotechnology and Bioengineering*, **2021**, 118, 979-991	4.9	1
2	Co-Transplant of Parathyroid Gland and Stem Cell-Derived Insulin-Producing Cells Enhances Graft Survival through Release of Pro-Angiogenic and Pro-Survival Factors. *Transplantation*, **2018**, 102, S350	1.8	1
1	Hedgehog Signaling in Endodermally Derived Tumors **2006**, 215-224		