

Douglas A Melton

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.

97
papers

21,381
citations

54
h-index

105
g-index

105
ext. papers

24,142
ext. citations

18.4
avg, IF

6.88
L-index

#	Paper	IF	Citations
97	Cell maturation: Hallmarks, triggers, and manipulation.. <i>Cell</i> , 2021 ,	56.2	2
96	209.6: Long-term Functional Survival of Human Stem Cell-derived Islets Microencapsulated in Alginate With CXCL12 in Non-human Primates Without Immunosuppression.. <i>Transplantation</i> , 2021 , 105, S16	1.8	
95	402.4: Genetic Approaches to Attain Hypo-immunogenic Human Stem Cell Derived Islets for Transplantation.. <i>Transplantation</i> , 2021 , 105, S28	1.8	
94	A human ESC line for efficient CRISPR editing of pluripotent stem cells. <i>Stem Cell Research</i> , 2021 , 57, 102591	1.6	0
93	Generation of a heterozygous GAPDH-Luciferase human ESC line (HVRDe008-A-1) for in vivo monitoring of stem cells and their differentiated progeny. <i>Stem Cell Research</i> , 2021 , 53, 102371	1.6	1
92	A Stem Cell Approach to Cure Type 1 Diabetes. <i>Cold Spring Harbor Perspectives in Biology</i> , 2021 , 13,	10.2	16
91	A therapeutic convection-enhanced macroencapsulation device for enhancing β cell viability and insulin secretion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	7
90	Building Biomimetic Potency Tests for Islet Transplantation. <i>Diabetes</i> , 2021 , 70, 347-363	0.9	5
89	A method for the generation of human stem cell-derived alpha cells. <i>Nature Communications</i> , 2020 , 11, 2241	17.4	30
88	Glucose Response by Stem Cell-Derived β Cells In Vitro Is Inhibited by a Bottleneck in Glycolysis. <i>Cell Reports</i> , 2020 , 31, 107623	10.6	29
87	A Nutrient-Sensing Transition at Birth Triggers Glucose-Responsive Insulin Secretion. <i>Cell Metabolism</i> , 2020 , 31, 1004-1016.e5	24.6	43
86	Exogenous GDF11, but not GDF8, reduces body weight and improves glucose homeostasis in mice. <i>Scientific Reports</i> , 2020 , 10, 4561	4.9	7
85	Purification of Live Stem-Cell-Derived Islet Lineage Intermediates. <i>Current Protocols in Stem Cell Biology</i> , 2020 , 53, e111	2.8	1
84	Organoid Maturation by Circadian Entrainment 2020 , 2, 7-13		
83	is a dual regulator of wound epidermis development and inflammation during the initiation of limb regeneration. <i>ELife</i> , 2020 , 9,	8.9	16
82	Inhibition of mTOR Signaling Enhances Maturation of Cardiomyocytes Derived From Human-Induced Pluripotent Stem Cells via p53-Induced Quiescence. <i>Circulation</i> , 2020 , 141, 285-300	16.7	36
81	Identification of a LIF-Responsive, Replication-Competent Subpopulation of Human β Cells. <i>Cell Metabolism</i> , 2020 , 31, 327-338.e6	24.6	10

80	Circadian Entrainment Triggers Maturation of Human In Vitro Islets. <i>Cell Stem Cell</i> , 2020 , 26, 108-122.e108	10.8	57
79	Modeling Type 1 Diabetes In Vitro Using Human Pluripotent Stem Cells. <i>Cell Reports</i> , 2020 , 32, 107894	10.6	20
78	A 3D culture platform enables development of zinc-binding prodrugs for targeted proliferation of β cells. <i>Science Advances</i> , 2020 , 6,	14.3	10
77	Genome-scale in vivo CRISPR screen identifies RNLS as a target for beta cell protection in type 1 diabetes. <i>Nature Metabolism</i> , 2020 , 2, 934-945	14.6	20
76	Synchronized stimulation and continuous insulin sensing in a microfluidic human Islet on a Chip designed for scalable manufacturing. <i>Lab on A Chip</i> , 2019 , 19, 2993-3010	7.2	44
75	Wnt Signaling Separates the Progenitor and Endocrine Compartments during Pancreas Development. <i>Cell Reports</i> , 2019 , 27, 2281-2291.e5	10.6	57
74	Charting cellular identity during human in vitro β cell differentiation. <i>Nature</i> , 2019 , 569, 368-373	50.4	189
73	Generation of hypoimmunogenic human pluripotent stem cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10441-10446	11.5	110
72	YAP inhibition enhances the differentiation of functional stem cell-derived insulin-producing β cells. <i>Nature Communications</i> , 2019 , 10, 1464	17.4	75
71	Identifying gene expression programs of cell-type identity and cellular activity with single-cell RNA-Seq. <i>ELife</i> , 2019 , 8,	8.9	73
70	Live Cell Monitoring and Enrichment of Stem Cell-Derived β Cells Using Intracellular Zinc Content as a Population Marker. <i>Current Protocols in Stem Cell Biology</i> , 2019 , 51, e99	2.8	8
69	Regenerating the field of cardiovascular cell therapy. <i>Nature Biotechnology</i> , 2019 , 37, 232-237	44.5	90
68	Alginate-microencapsulation of human stem cell-derived β cells with CXCL12 prolongs their survival and function in immunocompetent mice without systemic immunosuppression. <i>American Journal of Transplantation</i> , 2019 , 19, 1930-1940	8.7	52
67	Blastemal progenitors modulate immune signaling during early limb regeneration. <i>Development (Cambridge)</i> , 2019 , 146,	6.6	31
66	A Peninsular Structure Coordinates Asynchronous Differentiation with Morphogenesis to Generate Pancreatic Islets. <i>Cell</i> , 2019 , 176, 790-804.e13	56.2	59
65	Establishment of human pluripotent stem cell-derived pancreatic β like cells in the mouse pancreas. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 3924-3929	11.5	21
64	Apolipoprotein E is a pancreatic extracellular factor that maintains mature β cell gene expression. <i>PLoS ONE</i> , 2018 , 13, e0204595	3.7	4
63	Pancreas regeneration. <i>Nature</i> , 2018 , 557, 351-358	50.4	156

62	Retraction Notice to: Betatrophin: A Hormone that Controls Pancreatic β Cell Proliferation. <i>Cell</i> , 2017 , 168, 326	56.2	40
61	Generation of stem cell-derived β cells from patients with type 1 diabetes. <i>Nature Communications</i> , 2016 , 7, 11463	17.4	200
60	Long-term glycemic control using polymer-encapsulated human stem cell-derived beta cells in immune-competent mice. <i>Nature Medicine</i> , 2016 , 22, 306-11	50.5	430
59	Reprogrammed Stomach Tissue as a Renewable Source of Functional β Cells for Blood Glucose Regulation. <i>Cell Stem Cell</i> , 2016 , 18, 410-21	18	81
58	Resolving Discrepant Findings on ANGPTL8 in β Cell Proliferation: A Collaborative Approach to Resolving the Betatrophin Controversy. <i>PLoS ONE</i> , 2016 , 11, e0159276	3.7	34
57	Applied Developmental Biology: Making Human Pancreatic Beta Cells for Diabetics. <i>Current Topics in Developmental Biology</i> , 2016 , 117, 65-73	5.3	16
56	A Single-Cell Transcriptomic Map of the Human and Mouse Pancreas Reveals Inter- and Intra-cell Population Structure. <i>Cell Systems</i> , 2016 , 3, 346-360.e4	10.6	614
55	Modeling human nutrition using human embryonic stem cells. <i>Cell</i> , 2015 , 161, 12-17	56.2	7
54	A Src inhibitor regulates the cell cycle of human pluripotent stem cells and improves directed differentiation. <i>Journal of Cell Biology</i> , 2015 , 210, 1257-68	7.3	23
53	Angptl4 links β cell proliferation following glucagon receptor inhibition with adipose tissue triglyceride metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 15498-503	11.5	24
52	Testing pancreatic islet function at the single cell level by calcium influx with associated marker expression. <i>PLoS ONE</i> , 2015 , 10, e0122044	3.7	25
51	Perspectives on the activities of ANGPTL8/betatrophin. <i>Cell</i> , 2014 , 159, 467-8	56.2	38
50	Generation of functional human pancreatic β cells in vitro. <i>Cell</i> , 2014 , 159, 428-39	56.2	1259
49	Differentiated human stem cells resemble fetal, not adult, β cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 3038-43	11.5	204
48	MARIS: method for analyzing RNA following intracellular sorting. <i>PLoS ONE</i> , 2014 , 9, e89459	3.7	75
47	In vivo reprogramming of pancreatic acinar cells to three islet endocrine subtypes. <i>ELife</i> , 2014 , 3, e01846.9	6.9	92
46	Reversal of β cell de-differentiation by a small molecule inhibitor of the TGF β pathway. <i>ELife</i> , 2014 , 3, e02809	8.9	84
45	Brief report: VGLL4 is a novel regulator of survival in human embryonic stem cells. <i>Stem Cells</i> , 2013 , 31, 2833-41	5.8	11

44	How to make a functional β cell. <i>Development (Cambridge)</i> , 2013 , 140, 2472-83	6.6	171
43	Functional evaluation of ES cell-derived endodermal populations reveals differences between Nodal and Activin A-guided differentiation. <i>Development (Cambridge)</i> , 2013 , 140, 675-86	6.6	36
42	A simple tool to improve pluripotent stem cell differentiation. <i>Nature Methods</i> , 2013 , 10, 553-6	21.6	135
41	Betatrophin: a hormone that controls pancreatic β cell proliferation. <i>Cell</i> , 2013 , 153, 747-58	56.2	383
40	Adenosine kinase inhibition selectively promotes rodent and porcine islet β cell replication. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 3915-20	11.5	111
39	Self-renewal of embryonic-stem-cell-derived progenitors by organ-matched mesenchyme. <i>Nature</i> , 2012 , 491, 765-8	50.4	107
38	Functional beta-cell maturation is marked by an increased glucose threshold and by expression of urocortin 3. <i>Nature Biotechnology</i> , 2012 , 30, 261-4	44.5	239
37	Wnt signaling specifies and patterns intestinal endoderm. <i>Mechanisms of Development</i> , 2011 , 128, 387-400	7.6	76
36	How to make beta cells?. <i>Current Opinion in Cell Biology</i> , 2009 , 21, 727-32	9	63
35	Transcriptional dynamics of endodermal organ formation. <i>Developmental Dynamics</i> , 2009 , 238, 29-42	2.9	130
34	Small molecules efficiently direct endodermal differentiation of mouse and human embryonic stem cells. <i>Cell Stem Cell</i> , 2009 , 4, 348-58	18	356
33	In vivo reprogramming of adult pancreatic exocrine cells to beta-cells. <i>Nature</i> , 2008 , 455, 627-32	50.4	1618
32	Marked differences in differentiation propensity among human embryonic stem cell lines. <i>Nature Biotechnology</i> , 2008 , 26, 313-5	44.5	663
31	Genetic targeting of the endoderm with claudin-6CreER. <i>Developmental Dynamics</i> , 2008 , 237, 504-12	2.9	43
30	Notch signaling reveals developmental plasticity of Pax4(+) pancreatic endocrine progenitors and shunts them to a duct fate. <i>Mechanisms of Development</i> , 2007 , 124, 97-107	1.7	55
29	All beta cells contribute equally to islet growth and maintenance. <i>PLoS Biology</i> , 2007 , 5, e163	9.7	168
28	Prospective isolation and global gene expression analysis of definitive and visceral endoderm. <i>Developmental Biology</i> , 2007 , 304, 541-55	3.1	107
27	A multipotent progenitor domain guides pancreatic organogenesis. <i>Developmental Cell</i> , 2007 , 13, 103-14	10.2	414

26	Recovery from diabetes in mice by beta cell regeneration. <i>Journal of Clinical Investigation</i> , 2007 , 117, 2553-61	15.9	457
25	Reversal of type 1 diabetes in mice. <i>New England Journal of Medicine</i> , 2006 , 355, 89-90	59.2	20
24	The vascular basement membrane: a niche for insulin gene expression and Beta cell proliferation. <i>Developmental Cell</i> , 2006 , 10, 397-405	10.2	415
23	The molecular biography of the cell. <i>Cell</i> , 2005 , 120, 729-31	56.2	9
22	Core transcriptional regulatory circuitry in human embryonic stem cells. <i>Cell</i> , 2005 , 122, 947-56	56.2	3494
21	Direct regulation of intestinal fate by Notch. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 12443-8	11.5	228
20	Beta-catenin is essential for pancreatic acinar but not islet development. <i>Development (Cambridge)</i> , 2005 , 132, 4663-74	6.6	192
19	The Src family of tyrosine kinases is important for embryonic stem cell self-renewal. <i>Journal of Biological Chemistry</i> , 2004 , 279, 31590-8	5.4	114
18	Adult pancreatic beta-cells are formed by self-duplication rather than stem-cell differentiation. <i>Nature</i> , 2004 , 429, 41-6	50.4	1862
17	Derivation of embryonic stem-cell lines from human blastocysts. <i>New England Journal of Medicine</i> , 2004 , 350, 1353-6	59.2	804
16	Endothelial signaling during development. <i>Nature Medicine</i> , 2003 , 9, 661-8	50.5	415
15	Genes, signals, and lineages in pancreas development. <i>Annual Review of Cell and Developmental Biology</i> , 2003 , 19, 71-89	12.6	183
14	Signals from lateral plate mesoderm instruct endoderm toward a pancreatic fate. <i>Developmental Biology</i> , 2003 , 259, 109-22	3.1	204
13	Notch signaling controls multiple steps of pancreatic differentiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 14920-5	11.5	623
12	Direct evidence for the pancreatic lineage: NGN3+ cells are islet progenitors and are distinct from duct progenitors. <i>Development (Cambridge)</i> , 2002 , 129, 2447-2457	6.6	1103
11	Direct evidence for the pancreatic lineage: NGN3+ cells are islet progenitors and are distinct from duct progenitors. <i>Development (Cambridge)</i> , 2002 , 129, 2447-57	6.6	679
10	Key events of pancreas formation are triggered in gut endoderm by ectopic expression of pancreatic regulatory genes. <i>Genes and Development</i> , 2001 , 15, 444-54	12.6	227
9	Development of the pancreas in <i>Xenopus laevis</i> . <i>Developmental Dynamics</i> , 2000 , 218, 615-27	2.9	62

8	Notch gene expression during pancreatic organogenesis. <i>Mechanisms of Development</i> , 2000 , 94, 199-203	1.7	105
7	Activin receptor patterning of foregut organogenesis. <i>Genes and Development</i> , 2000 , 14, 1866-1871	12.6	160
6	Vertebrate endoderm development. <i>Annual Review of Cell and Developmental Biology</i> , 1999 , 15, 393-410	12.6	424
5	Mixer, a homeobox gene required for endoderm development. <i>Science</i> , 1998 , 281, 91-6	33.3	180
4	Part A: Directed Differentiation of Human Embryonic Stem Cells into Early Endoderm Cells	179-186	1
3	Derivation of Human Embryonic Stem Cells	35-51	2
2	Other Future Directions	1045-1069	
1	Development of the pancreas in <i>Xenopus laevis</i>		2