Peter C Butler

List of Publications by Year
in descending order

110 papers	13,674 citations	41344 49 h-index	25787 108 g-index
112 all docs	112 docs citations	112 times ranked	13639 citing authors

#	Article	IF	Citations
1	Î²-Cell Deficit and Increased Î²-Cell Apoptosis in Humans With Type 2 Diabetes. Diabetes, 2003, 52, 102-110.	0.6	3,615
2	Î²-Cell Replication Is the Primary Mechanism Subserving the Postnatal Expansion of Î²-Cell Mass in Humans. Diabetes, 2008, 57, 1584-1594.	0.6	616
3	Islet Amyloid in Type 2 Diabetes, and the Toxic Oligomer Hypothesis. Endocrine Reviews, 2008, 29, 303-316.	20.1	541
4	Sustained beta cell apoptosis in patients with long-standing type 1 diabetes: indirect evidence for islet regeneration?. Diabetologia, 2005, 48, 2221-2228.	6.3	441
5	Pancreas volumes in humans from birth to age one hundred taking into account sex, obesity, and presence of typeâ€2 diabetes. Clinical Anatomy, 2007, 20, 933-942.	2.7	378
6	Increased Â-Cell Apoptosis Prevents Adaptive Increase in Â-Cell Mass in Mouse Model of Type 2 Diabetes: Evidence for Role of Islet Amyloid Formation Rather Than Direct Action of Amyloid. Diabetes, 2003, 52, 2304-2314.	0.6	374
7	Adaptive changes in pancreatic beta cell fractional area and beta cell turnover in human pregnancy. Diabetologia, 2010, 53, 2167-2176.	6.3	371
8	High Expression Rates of Human Islet Amyloid Polypeptide Induce Endoplasmic Reticulum Stressâ€“Mediated Î²-Cell Apoptosis, a Characteristic of Humans With Type 2 but Not Type 1 Diabetes. Diabetes, 2007, 56, 2016-2027.	0.6	362
9	Î²-Cell Mass and Turnover in Humans. Diabetes Care, 2013, 36, 111-117.	8.6	330
10	A Critical Analysis of the Clinical Use of Incretin-Based Therapies. Diabetes Care, 2013, 36, 2118-2125.	8.6	264
11	Diabetes Due to a Progressive Defect in Î²-Cell Mass in Rats Transgenic for Human Islet Amyloid Polypeptide (HIP Rat). Diabetes, 2004, 53, 1509-1516.	0.6	239
12	The replication of Î² cells in normal physiology, in disease and for therapy. Nature Clinical Practice Endocrinology and Metabolism, 2007, 3, 758-768.	2.8	238
13	Beneficial Endocrine but Adverse Exocrine Effects of Sitagliptin in the Human Islet Amyloid Polypeptide Transgenic Rat Model of Type 2 Diabetes. Diabetes, 2009, 58, 1604-1615.	0.6	222
14	Evidence for Proteotoxicity in Î² Cells in Type 2 Diabetes. American Journal of Pathology, 2010, 176, 861-869.	3.8	207
15	Pulsatile Insulin Secretion Dictates Systemic Insulin Delivery by Regulating Hepatic Insulin Extraction In Humans. Diabetes, 2005, 54, 1649-1656.	0.6	201
16	Chronic GLP-1 Receptor Activation by Exendin-4 Induces Expansion of Pancreatic Duct Glands in Rats and Accelerates Formation of Dysplastic Lesions and Chronic Pancreatitis in the KrasG12D Mouse Model. Diabetes, 2012, 61, 1250-1262.	0.6	201
17	Autophagy defends pancreatic Î² cells from human islet amyloid polypeptide-induced toxicity. Journal of Clinical Investigation, 2014, 124, 3489-3500.	8.2	188
18	Pulsatile insulin secretion, impaired glucose tolerance and type 2 diabetes. Molecular Aspects of Medicine, 2015, 42, 61-77.	6.4	186

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19	Relationship Between Â-Cell Mass and Fasting Blood Glucose Concentration in Humans. Diabetes Care, 2006, 29, 717-718.	8.6	184
20	Pulsatile Insulin Secretion: Detection, Regulation, and Role in Diabetes. Diabetes, 2002, 51, S245-S254.	0.6	180
21	Direct evidence of attempted beta cell regeneration in an 89-year-old patient with recent-onset type 1 diabetes. Diabetologia, 2006, 49, 1838-1844.	6.3	177
22	Human Islet Amyloid Polypeptide Oligomers Disrupt Cell Coupling, Induce Apoptosis, and Impair Insulin Secretion in Isolated Human Islets. Diabetes, 2007, 56, 65-71.	0.6	170
23	Toxic Human Islet Amyloid Polypeptide (h-IAPP) Oligomers Are Intracellular, and Vaccination to Induce Anti-Toxic Oligomer Antibodies Does Not Prevent h-IAPP-Induced Â-Cell Apoptosis in h-IAPP Transgenic Mice. Diabetes, 2007, 56, 1324-1332.	0.6	167
24	Highly permeable artificial water channels that can self-assemble into two-dimensional arrays. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9810-9815.	7.1	152
25	Inhibition of human IAPP fibril formation does not prevent Î²-cell death: evidence for distinct actions of oligomers and fibrils of human IAPP. American Journal of Physiology - Endocrinology and Metabolism, 2006, 291, E1317-E1324.	3.5	148
26	Pulsatile Portal Vein Insulin Delivery Enhances Hepatic Insulin Action and Signaling. Diabetes, 2012, 61, 2269-2279.	0.6	142
27	Î²-Cell Deficit Due to Increased Apoptosis in the Human Islet Amyloid Polypeptide Transgenic (HIP) Rat Recapitulates the Metabolic Defects Present in Type 2 Diabetes. Diabetes, 2006, 55, 2106-2114.	0.6	134
28	Direct Measurement of Pulsatile Insulin Secretion from the Portal Vein in Human Subjects1. Journal of Clinical Endocrinology and Metabolism, 2000, 85, 4491-4499.	3.6	132
29	Induction of endoplasmic reticulum stress-induced Î²-cell apoptosis and accumulation of polyubiquitinated proteins by human islet amyloid polypeptide. American Journal of Physiology - Endocrinology and Metabolism, 2007, 293, E1656-E1662.	3.5	126
30	Islet Amyloid Polypeptide (IAPP) Transgenic Rodents as Models for Type 2 Diabetes. ILAR Journal, 2006, 47, 225-233.	1.8	121
31	Substrate-driven chemotactic assembly in an enzyme cascade. Nature Chemistry, 2018, 10, 311-317.	13.6	121
32	Modestly increased beta cell apoptosis but no increased beta cell replication in recent-onset type 1 diabetic patients who died of diabetic ketoacidosis. Diabetologia, 2007, 50, 2323-2331.	6.3	116
33	Overnight inhibition of insulin secretion restores pulsatility and proinsulin/insulin ratio in type 2 diabetes. American Journal of Physiology - Endocrinology and Metabolism, 2000, 279, E520-E528.	3.5	110
34	Replication Increases Â-Cell Vulnerability to Human Islet Amyloid Polypeptide-Induced Apoptosis. Diabetes, 2003, 52, 1701-1708.	0.6	107
35	Î²-Cell Deficit in Obese Type 2 Diabetes, a Minor Role of Î²-Cell Dedifferentiation and Degranulation. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 523-532.	3.6	107
36	Î²-Cell Dysfunctional ERAD/Ubiquitin/Proteasome System in Type 2 Diabetes Mediated by Islet Amyloid Polypeptideâ€“Induced UCH-L1 Deficiency. Diabetes, 2011, 60, 227-238.	0.6	103

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37	Î²-Cell Failure in Type 2 Diabetes: A Case of Asking Too Much of Too Few?. Diabetes, 2013, 62, 327-335.	0.6	103
38	Achieving high permeability and enhanced selectivity for Angstrom-scale separations using artificial water channel membranes. Nature Communications, 2018, 9, 2294.	12.8	95
39	Activation of Peroxisome Proliferator-Activated Receptor-Î³ by Rosiglitazone Protects Human Islet Cells against Human Islet Amyloid Polypeptide Toxicity by a Phosphatidylinositol 3â€²-Kinase-Dependent Pathway. Journal of Clinical Endocrinology and Metabolism, 2005, 90, 6678-6686.	3.6	94
40	Pancreatic duct replication is increased with obesity and type 2 diabetes in humans. Diabetologia, 2010, 53, 21-26.	6.3	87
41	Successful Versus Failed Adaptation to High-Fat Dietâ€“Induced Insulin Resistance. Diabetes, 2009, 58, 906-916.	0.6	84
42	The effect of curcumin on human islet amyloid polypeptide misfolding and toxicity. Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis, 2010, 17, 118-128.	3.0	83
43	Relationship between pancreatic vesicular monoamine transporter 2 (VMAT2) and insulin expression in human pancreas. Journal of Molecular Histology, 2008, 39, 543-551.	2.2	80
44	Mechanisms of Impaired Fasting Glucose and Glucose Intolerance Induced by a Â50% Pancreatectomy. Diabetes, 2006, 55, 2347-2356.	0.6	71
45	Increased islet beta cell replication adjacent to intrapancreatic gastrinomas in humans. Diabetologia, 2006, 49, 2689-2696.	6.3	62
46	IAPP toxicity activates HIF1Î±/PFKFB3 signaling delaying Î²-cell loss at the expense of Î²-cell function. Nature Communications, 2019, 10, 2679.	12.8	55
47	UCHL1 deficiency exacerbates human islet amyloid polypeptide toxicity in Î²-cells. Autophagy, 2014, 10, 1004-1014.	9.1	54
48	Glucose Stimulates Pulsatile Insulin Secretion from Human Pancreatic Islets by Increasing Secretory Burst Mass: Dose-Response Relationships. Journal of Clinical Endocrinology and Metabolism, 2003, 88, 742-747.	3.6	53
49	Increased Frequency of Hormone Negative and Polyhormonal Endocrine Cells in Lean Individuals With Type 2 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 3628-3636.	3.6	51
50	The Potential for Stem Cell Therapy in Diabetes. Pediatric Research, 2006, 59, 65R-73R.	2.3	50
51	Increased Hormone-Negative Endocrine Cells in the Pancreas in Type 1 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 3487-3496.	3.6	50
52	Activation of the HIF1Î±/PFKFB3 stress response pathway in beta cells in type 1 diabetes. Diabetologia, 2020, 63, 149-161.	6.3	49
53	Adaptations in pulsatile insulin secretion, hepatic insulin clearance, and Î²-cell mass to age-related insulin resistance in rats. American Journal of Physiology - Endocrinology and Metabolism, 2008, 295, E832-E841.	3.5	48
54	Hematopoietic Stem Cells Derived From Adult Donors Are Not a Source of Pancreatic Â-Cells in Adult Nondiabetic Humans. Diabetes, 2007, 56, 1810-1816.	0.6	46

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55	Cyclin-Dependent Kinase 5 Promotes Pancreatic Â-Cell Survival via Fak-Akt Signaling Pathways. Diabetes, 2011, 60, 1186-1197.	0.6	44
56	Beta cell nuclear musculoaponeurotic fibrosarcoma oncogene family A (MafA) is deficient in type 2 diabetes. Diabetologia, 2012, 55, 2985-2988.	6.3	44
57	Enhanced Diffusion of Passive Tracers in Active Enzyme Solutions. Nano Letters, 2017, 17, 4807-4812.	9.1	43
58	Membrane Curvature-sensing and Curvature-inducing Activity of Islet Amyloid Polypeptide and Its Implications for Membrane Disruption. Journal of Biological Chemistry, 2015, 290, 25782-25793.	3.4	40
59	CHOP Contributes to, But Is Not the Only Mediator of, IAPP Induced Î²-Cell Apoptosis. Molecular Endocrinology, 2016, 30, 446-454.	3.7	39
60	Mechanotargeting: Mechanicsâ€Ðependent Cellular Uptake of Nanoparticles. Advanced Materials, 2018, 30, e1707464.	21.0	38
61	Mechanotransmission in endothelial cells subjected to oscillatory and multi-directional shear flow. Journal of the Royal Society Interface, 2017, 14, 20170185.	3.4	37
62	Integrated multimodal microscopy, time-resolved fluorescence, and optical-trap rheometry: toward single molecule mechanobiology. Journal of Biomedical Optics, 2007, 12, 014012.	2.6	36
63	Molecular Cloning, Overexpression and Characterization of a Novel Water Channel Protein from Rhodobacter sphaeroides. PLoS ONE, 2014, 9, e86830.	2.5	30
64	Relationship between fractional pancreatic beta cell area and fasting plasma glucose concentration in monkeys. Diabetologia, 2010, 53, 111-114.	6.3	27
65	Impulsive Enzymes: A New Force in Mechanobiology. Cellular and Molecular Bioengineering, 2015, 8, 106-118.	2.1	27
66	Cell cycleâ€“related metabolism and mitochondrial dynamics in a replication-competent pancreatic beta-cell line. Cell Cycle, 2017, 16, 2086-2099.	2.6	27
67	Visualizing insulin vesicle neighborhoods in Î² cells by cryoâ€“electron tomography. Science Advances, 2020, 6, .	10.3	27
68	Recovery of high-quality RNA from laser capture microdissected human and rodent pancreas. Journal of Histotechnology, 2016, 39, 59-65.	0.5	26
69	Insulin-Degrading Enzyme Inhibition, a Novel Therapy for Type 2 Diabetes?. Cell Metabolism, 2014, 20, 201-203.	16.2	25
70	Many Commercially Available Antibodies for Detection of CHOP Expression as a Marker of Endoplasmic Reticulum Stress Fail Specificity Evaluation. Cell Biochemistry and Biophysics, 2008, 51, 105-107.	1.8	24
71	Shear-induced force transmission in a multicomponent, multicell model of the endothelium. Journal of the Royal Society Interface, 2014, 11, 20140431.	3.4	24
72	Membrane Protein Insertion into and Compatibility with Biomimetic Membranes. Advanced Biology, 2017, 1, e1700053.	3.0	24

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73	Dynamics of Î²-cell turnover: evidence for Î²-cell turnover and regeneration from sources of Î²-cells other than Î²-cell replication in the HIP rat. American Journal of Physiology - Endocrinology and Metabolism, 2009, 297, E323-E330.	3.5	23
74	Î²1-Integrin-Mediated Adhesion Is Lipid-Bilayer Dependent. Biophysical Journal, 2017, 113, 1080-1092.	0.5	22
75	Pancreatic Nonhormone Expressing Endocrine Cells in Children With Type 1 Diabetes. Journal of the Endocrine Society, 2017, 1, 385-395.	0.2	22
76	Annexin A5 Directly Interacts with Amyloidogenic Proteins and Reduces Their Toxicity. Biochemistry, 2009, 48, 10568-10576.	2.5	19
77	Increased Chromogranin Aâ€“Positive Hormone-Negative Cells in Chronic Pancreatitis. Journal of Clinical Endocrinology and Metabolism, 2018, 103, 2126-2135.	3.6	19
78	Live-cell imaging of glucose-induced metabolic coupling of Î² and Î±Âcell metabolism in health and typeÂ2 diabetes. Communications Biology, 2021, 4, 594.	4.4	19
79	IAPP-induced beta cell stress recapitulates the islet transcriptome in type 2 diabetes. Diabetologia, 2022, 65, 173-187.	6.3	19
80	Increased Proliferation of the Pancreatic Duct Gland Compartment in Type 1 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2017, 102, jc.2016-3001.	3.6	18
81	Î² Cellâ€“specific increased expression of calpastatin prevents diabetes induced by islet amyloid polypeptide toxicity. JCI Insight, 2016, 1, e89590.	5.0	17
82	Islet inflammation and ductal proliferation may be linked to increased pancreatitis risk in type 2 diabetes. JCI Insight, 2017, 2, .	5.0	17
83	Proteasomal degradation of the histone acetyl transferase p300 contributes to beta-cell injury in a diabetes environment. Cell Death and Disease, 2018, 9, 600.	6.3	16
84	The Î²-cell glucose toxicity hypothesis: Attractive but difficult to prove. Metabolism: Clinical and Experimental, 2021, 124, 154870.	3.4	16
85	Mechanobiology of the abluminal glycocalyx. Biorheology, 2019, 56, 101-112.	0.4	13
86	Development of factors to convert frequency to rate for Î²-cell replication and apoptosis quantified by time-lapse video microscopy and immunohistochemistry. American Journal of Physiology - Endocrinology and Metabolism, 2009, 296, E89-E96.	3.5	12
87	A low frequency of pancreatic islet insulin-expressing cells derived from cord blood stem cell allografts in humans. Diabetologia, 2011, 54, 1066-1074.	6.3	12
88	Using handgrip strength to screen for diabetes in developing countries. Journal of Medical Engineering and Technology, 2016, 40, 8-14.	1.4	11
89	Effective encapsulation and biological activity of phosphorylated chemotherapeutics in calcium phosphosilicate nanoparticles for the treatment of pancreatic cancer. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 2313-2324.	3.3	11
90	Glucagon-like Peptide 1 Drugs as Second-line Therapy for Type 2 Diabetes. JAMA Internal Medicine, 2016, 176, 1440.	5.1	9

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91	Light-Driven Chloride Transport Kinetics of Halorhodopsin. Biophysical Journal, 2018, 115, 353-360.	0.5	9
92	Pregnancy in human IAPP transgenic mice recapitulates beta cell stress in type 2 diabetes. Diabetologia, 2019, 62, 1000-1010.	6.3	9
93	Pancreatic alpha-cell mass across adult human lifespan. European Journal of Endocrinology, 2020, 182, 219-231.	3.7	9
94	An Increase in Chromogranin A-Positive, Hormone-Negative Endocrine Cells in Pancreas in Cystic Fibrosis. Journal of the Endocrine Society, 2018, 2, 1058-1066.	0.2	8
95	Insulin Secretion in Type II Diabetes Mellitus. , 1997, , 119-136.		8
96	Response to comment on: Meier JJ, Lin JC, Butler AE, Galasso R, Martinez DS, Butler PC (2006) Direct evidence of attempted beta cell regeneration in an 89-year-old patient with recent-onset type 1 diabetes. Diabetologia 49:1838â€“1844. Diabetologia, 2006, 49, 2803-2804.	6.3	7
97	Down Syndrome-Associated Diabetes Is Not Due To a Congenital Deficiency in Î² Cells. Journal of the Endocrine Society, 2017, 1, 39-45.	0.2	7
98	A transparent low intensity pulsed ultrasound (LIPUS) chip for high-throughput cell stimulation. Lab on A Chip, 2021, 21, 4734-4742.	6.0	7
99	Response to Comment on: Saisho et al. Î²-Cell Mass and Turnover in Humans: Effects of Obesity and Aging. Diabetes Care 2013;36:111â€“117. Diabetes Care, 2013, 36, e112-e112.	8.6	6
100	Islet Amyloid Polypeptide (IAPP) and Insulin Secretion. , 1994, , 381-398.		5
101	Reversing type 1 diabetes with stem cellâ€“derived islets: a step closer to the dream?. Journal of Clinical Investigation, 2022, 132, .	8.2	5
102	Shortened Î²-cell lifespan leads to Î²-cell deficit in a rodent model of type 2 diabetes. American Journal of Physiology - Endocrinology and Metabolism, 2011, 300, E933-E938.	3.5	4
103	Lipid bilayer control of nascent adhesion formation. Biomedical Engineering Letters, 2015, 5, 172-180.	4.1	4
104	In the setting of Î²-cell stress, the pancreatic duct gland transcriptome shows characteristics of an activated regenerative response. American Journal of Physiology - Renal Physiology, 2018, 315, G848-G854.	3.4	4
105	Liposome-based measurement of light-driven chloride transport kinetics of halorhodopsin. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183637.	2.6	4
106	Evaluation of immunohistochemical staining for glucagon in human pancreatic tissue. Journal of Histotechnology, 2016, 39, 8-16.	0.5	3
107	Low Grade Islet but Marked Exocrine Pancreas Inflammation in an Adult with Autoimmune Pre-Diabetes. Case Reports in Endocrinology, 2019, 2019, 1-6.	0.4	2
108	Supplying Insulin while Evading Immunity. New England Journal of Medicine, 2021, 384, 967-969.	27.0	1

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109	Farewell Statement From Dr. Peter Butler as Outgoing Editor in Chief of Diabetes. Diabetes, 2011, 60, 3099-3099.	0.6	0
110	Insulin Secretion. , 2010, , 624-635.		0