

Peter C Butler

List of Publications by Year in Descending Order

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Version: 2024-04-23

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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.

107
papers

11,463
citations

46
h-index

107
g-index

112
ext. papers

12,749
ext. citations

6.8
avg, IF

6.08
L-index

#	Paper	IF	Citations
107	IAPP-induced beta cell stress recapitulates the islet transcriptome in type 2 diabetes. <i>Diabetologia</i> , 2022 , 65, 173-187	10.3	3
106	A transparent low intensity pulsed ultrasound (LIPUS) chip for high-throughput cell stimulation. <i>Lab on A Chip</i> , 2021 , 21, 4734-4742	7.2	3
105	Supplying Insulin while Evading Immunity. <i>New England Journal of Medicine</i> , 2021 , 384, 967-969	59.2	1
104	Live-cell imaging of glucose-induced metabolic coupling of β and δ cell metabolism in health and type 2 diabetes. <i>Communications Biology</i> , 2021 , 4, 594	6.7	3
103	Liposome-based measurement of light-driven chloride transport kinetics of halorhodopsin. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2021 , 1863, 183637	3.8	0
102	The β cell glucose toxicity hypothesis: Attractive but difficult to prove. <i>Metabolism: Clinical and Experimental</i> , 2021 , 124, 154870	12.7	0
101	Visualizing insulin vesicle neighborhoods in β cells by cryo-electron tomography. <i>Science Advances</i> , 2020 , 6,	14.3	5
100	Pancreatic alpha-cell mass across adult human lifespan. <i>European Journal of Endocrinology</i> , 2020 , 182, 219-231	6.5	4
99	Activation of the HIF1 α /PFKFB3 stress response pathway in beta cells in type 1 diabetes. <i>Diabetologia</i> , 2020 , 63, 149-161	10.3	26
98	Mechanobiology of the abluminal glycocalyx. <i>Biorheology</i> , 2019 , 56, 101-112	1.7	11
97	IAPP toxicity activates HIF1 α /PFKFB3 signaling delaying β cell loss at the expense of β cell function. <i>Nature Communications</i> , 2019 , 10, 2679	17.4	34
96	Pregnancy in human IAPP transgenic mice recapitulates beta cell stress in type 2 diabetes. <i>Diabetologia</i> , 2019 , 62, 1000-1010	10.3	5
95	Low Grade Islet but Marked Exocrine Pancreas Inflammation in an Adult with Autoimmune Pre-Diabetes. <i>Case Reports in Endocrinology</i> , 2019 , 2019, 5863569	1.2	1
94	Substrate-driven chemotactic assembly in an enzyme cascade. <i>Nature Chemistry</i> , 2018 , 10, 311-317	17.6	87
93	Light-Driven Chloride Transport Kinetics of Halorhodopsin. <i>Biophysical Journal</i> , 2018 , 115, 353-360	2.9	4
92	Increased Chromogranin A-Positive Hormone-Negative Cells in Chronic Pancreatitis. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2018 , 103, 2126-2135	5.6	14
91	In the setting of β cell stress, the pancreatic duct gland transcriptome shows characteristics of an activated regenerative response. <i>American Journal of Physiology - Renal Physiology</i> , 2018 , 315, G848-G854 ^{5.1}	5.1	4

90	Achieving high permeability and enhanced selectivity for Angstrom-scale separations using artificial water channel membranes. <i>Nature Communications</i> , 2018 , 9, 2294	17.4	60
89	An Increase in Chromogranin A-Positive, Hormone-Negative Endocrine Cells in Pancreas in Cystic Fibrosis. <i>Journal of the Endocrine Society</i> , 2018 , 2, 1058-1066	0.4	7
88	Proteasomal degradation of the histone acetyl transferase p300 contributes to beta-cell injury in a diabetes environment. <i>Cell Death and Disease</i> , 2018 , 9, 600	9.8	8
87	Mechanotargeting: Mechanics-Dependent Cellular Uptake of Nanoparticles. <i>Advanced Materials</i> , 2018 , 30, e1707464	24	25
86	Mechanotransmission in endothelial cells subjected to oscillatory and multi-directional shear flow. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	16
85	Pancreatic Nonhormone Expressing Endocrine Cells in Children With Type 1 Diabetes. <i>Journal of the Endocrine Society</i> , 2017 , 1, 385-395	0.4	8
84	Increased Proliferation of the Pancreatic Duct Gland Compartment in Type 1 Diabetes. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2017 , 102, 200-209	5.6	14
83	Cell cycle-related metabolism and mitochondrial dynamics in a replication-competent pancreatic beta-cell line. <i>Cell Cycle</i> , 2017 , 16, 2086-2099	4.7	18
82	Integrin-Mediated Adhesion Is Lipid-Bilayer Dependent. <i>Biophysical Journal</i> , 2017 , 113, 1080-1092	2.9	11
81	Enhanced Diffusion of Passive Tracers in Active Enzyme Solutions. <i>Nano Letters</i> , 2017 , 17, 4807-4812	11.5	30
80	Membrane Protein Insertion into and Compatibility with Biomimetic Membranes. <i>Advanced Biology</i> , 2017 , 1, e1700053	3.5	15
79	Down Syndrome-Associated Diabetes Is Not Due To a Congenital Deficiency in Cells. <i>Journal of the Endocrine Society</i> , 2017 , 1, 39-45	0.4	6
78	Effective encapsulation and biological activity of phosphorylated chemotherapeutics in calcium phosphosilicate nanoparticles for the treatment of pancreatic cancer. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2017 , 13, 2313-2324	6	9
77	Islet inflammation and ductal proliferation may be linked to increased pancreatitis risk in type 2 diabetes. <i>JCI Insight</i> , 2017 , 2,	9.9	12
76	Increased Hormone-Negative Endocrine Cells in the Pancreas in Type 1 Diabetes. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016 , 101, 3487-96	5.6	32
75	Using handgrip strength to screen for diabetes in developing countries. <i>Journal of Medical Engineering and Technology</i> , 2016 , 40, 8-14	1.8	5
74	Evaluation of immunohistochemical staining for glucagon in human pancreatic tissue. <i>Journal of Histotechnology</i> , 2016 , 39, 8-16	1.3	3
73	CHOP Contributes to, But Is Not the Only Mediator of, IAPP Induced β Cell Apoptosis. <i>Molecular Endocrinology</i> , 2016 , 30, 446-54		32

72	βCell Deficit in Obese Type 2 Diabetes, a Minor Role of βCell Dedifferentiation and Degranulation. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016 , 101, 523-32	5.6	76
71	Cell-specific increased expression of calpastatin prevents diabetes induced by islet amyloid polypeptide toxicity. <i>JCI Insight</i> , 2016 , 1, e89590	9.9	10
70	Recovery of high-quality RNA from laser capture microdissected human and rodent pancreas. <i>Journal of Histotechnology</i> , 2016 , 39, 59-65	1.3	19
69	Increased Frequency of Hormone Negative and Polyhormonal Endocrine Cells in Lean Individuals With Type 2 Diabetes. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016 , 101, 3628-3636	5.6	28
68	Impulsive Enzymes: A New Force in Mechanobiology. <i>Cellular and Molecular Bioengineering</i> , 2015 , 8, 106-118	3.8	24
67	Highly permeable artificial water channels that can self-assemble into two-dimensional arrays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 9810-5	11.5	119
66	Lipid bilayer control of nascent adhesion formation. <i>Biomedical Engineering Letters</i> , 2015 , 5, 172-180	3.6	3
65	Membrane Curvature-sensing and Curvature-inducing Activity of Islet Amyloid Polypeptide and Its Implications for Membrane Disruption. <i>Journal of Biological Chemistry</i> , 2015 , 290, 25782-93	5.4	28
64	Pulsatile insulin secretion, impaired glucose tolerance and type 2 diabetes. <i>Molecular Aspects of Medicine</i> , 2015 , 42, 61-77	16.7	122
63	Insulin-degrading enzyme inhibition, a novel therapy for type 2 diabetes?. <i>Cell Metabolism</i> , 2014 , 20, 201-3	24.6	19
62	Molecular cloning, overexpression and characterization of a novel water channel protein from <i>Rhodobacter sphaeroides</i> . <i>PLoS ONE</i> , 2014 , 9, e86830	3.7	25
61	UCHL1 deficiency exacerbates human islet amyloid polypeptide toxicity in βcells: evidence of interplay between the ubiquitin/proteasome system and autophagy. <i>Autophagy</i> , 2014 , 10, 1004-14	10.2	43
60	Shear-induced force transmission in a multicomponent, multicell model of the endothelium. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140431	4.1	19
59	Autophagy defends pancreatic βcells from human islet amyloid polypeptide-induced toxicity. <i>Journal of Clinical Investigation</i> , 2014 , 124, 3489-500	15.9	149
58	A critical analysis of the clinical use of incretin-based therapies: Are the GLP-1 therapies safe?. <i>Diabetes Care</i> , 2013 , 36, 2118-25	14.6	214
57	βCell failure in type 2 diabetes: a case of asking too much of too few?. <i>Diabetes</i> , 2013 , 62, 327-35	0.9	89
56	Response to Comment on: Saisho et al. βcell mass and turnover in humans: effects of obesity and aging. <i>Diabetes Care</i> 2013;36:111-117. <i>Diabetes Care</i> , 2013 , 36, e112	14.6	5
55	βcell mass and turnover in humans: effects of obesity and aging. <i>Diabetes Care</i> , 2013 , 36, 111-7	14.6	267

54	Pulsatile portal vein insulin delivery enhances hepatic insulin action and signaling. <i>Diabetes</i> , 2012 , 61, 2269-79	0.9	111
53	Beta cell nuclear musculoaponeurotic fibrosarcoma oncogene family A (MafA) is deficient in type 2 diabetes. <i>Diabetologia</i> , 2012 , 55, 2985-8	10.3	37
52	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 Kras(G12D) mouse model. <i>Diabetes</i> , 2012 , 61, 1250-62	0.9	172
51	Cyclin-dependent kinase 5 promotes pancreatic β cell survival via Fak-Akt signaling pathways. <i>Diabetes</i> , 2011 , 60, 1186-97	0.9	34
50	A low frequency of pancreatic islet insulin-expressing cells derived from cord blood stem cell allografts in humans. <i>Diabetologia</i> , 2011 , 54, 1066-74	10.3	10
49	Shortened β -cell lifespan leads to β -cell deficit in a rodent model of type 2 diabetes. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2011 , 300, E933-8	6	4
48	β cell dysfunctional ERAD/ubiquitin/proteasome system in type 2 diabetes mediated by islet amyloid polypeptide-induced UCH-L1 deficiency. <i>Diabetes</i> , 2011 , 60, 227-38	0.9	79
47	Evidence for proteotoxicity in beta cells in type 2 diabetes: toxic islet amyloid polypeptide oligomers form intracellularly in the secretory pathway. <i>American Journal of Pathology</i> , 2010 , 176, 861-9 ^{5.8}	172	
46	The effect of curcumin on human islet amyloid polypeptide misfolding and toxicity. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2010 , 17, 118-28	2.7	76
45	Relationship between fractional pancreatic beta cell area and fasting plasma glucose concentration in monkeys. <i>Diabetologia</i> , 2010 , 53, 111-4	10.3	24
44	Pancreatic duct replication is increased with obesity and type 2 diabetes in humans. <i>Diabetologia</i> , 2010 , 53, 21-6	10.3	74
43	Adaptive changes in pancreatic beta cell fractional area and beta cell turnover in human pregnancy. <i>Diabetologia</i> , 2010 , 53, 2167-76	10.3	296
42	Insulin Secretion 2010 , 624-635		
41	Successful versus failed adaptation to high-fat diet-induced insulin resistance: the role of IAPP-induced beta-cell endoplasmic reticulum stress. <i>Diabetes</i> , 2009 , 58, 906-16	0.9	75
40	Annexin A5 directly interacts with amyloidogenic proteins and reduces their toxicity. <i>Biochemistry</i> , 2009 , 48, 10568-76	3.2	17
39	Beneficial endocrine but adverse exocrine effects of sitagliptin in the human islet amyloid polypeptide transgenic rat model of type 2 diabetes: interactions with metformin. <i>Diabetes</i> , 2009 , 58, 1604-15	0.9	190
38	Development of factors to convert frequency to rate for beta-cell replication and apoptosis quantified by time-lapse video microscopy and immunohistochemistry. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2009 , 296, E89-96	6	10
37	Dynamics of beta-cell turnover: evidence for beta-cell turnover and regeneration from sources of beta-cells other than beta-cell replication in the HIP rat. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2009 , 297, E323-30	6	21

36	Beta-cell replication is the primary mechanism subserving the postnatal expansion of beta-cell mass in humans. <i>Diabetes</i> , 2008 , 57, 1584-94	0.9	529
35	Adaptations in pulsatile insulin secretion, hepatic insulin clearance, and beta-cell mass to age-related insulin resistance in rats. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2008 , 295, E832-41	6	44
34	Islet amyloid in type 2 diabetes, and the toxic oligomer hypothesis. <i>Endocrine Reviews</i> , 2008 , 29, 303-16	27.2	467
33	Relationship between pancreatic vesicular monoamine transporter 2 (VMAT2) and insulin expression in human pancreas. <i>Journal of Molecular Histology</i> , 2008 , 39, 543-51	3.3	73
32	Many commercially available antibodies for detection of CHOP expression as a marker of endoplasmic reticulum stress fail specificity evaluation. <i>Cell Biochemistry and Biophysics</i> , 2008 , 51, 105-7 ^{3.2}		22
31	The replication of beta cells in normal physiology, in disease and for therapy. <i>Nature Clinical Practice Endocrinology and Metabolism</i> , 2007 , 3, 758-68		210
30	Pancreas volumes in humans from birth to age one hundred taking into account sex, obesity, and presence of type-2 diabetes. <i>Clinical Anatomy</i> , 2007 , 20, 933-42	2.5	305
29	Modestly increased beta cell apoptosis but no increased beta cell replication in recent-onset type 1 diabetic patients who died of diabetic ketoacidosis. <i>Diabetologia</i> , 2007 , 50, 2323-31	10.3	95
28	Hematopoietic stem cells derived from adult donors are not a source of pancreatic beta-cells in adult nondiabetic humans. <i>Diabetes</i> , 2007 , 56, 1810-6	0.9	37
27	Toxic human islet amyloid polypeptide (h-IAPP) oligomers are intracellular, and vaccination to induce anti-toxic oligomer antibodies does not prevent h-IAPP-induced beta-cell apoptosis in h-IAPP transgenic mice. <i>Diabetes</i> , 2007 , 56, 1324-32	0.9	152
26	High expression rates of human islet amyloid polypeptide induce endoplasmic reticulum stress mediated beta-cell apoptosis, a characteristic of humans with type 2 but not type 1 diabetes. <i>Diabetes</i> , 2007 , 56, 2016-27	0.9	318
25	Human islet amyloid polypeptide oligomers disrupt cell coupling, induce apoptosis, and impair insulin secretion in isolated human islets. <i>Diabetes</i> , 2007 , 56, 65-71	0.9	151
24	Integrated multimodal microscopy, time-resolved fluorescence, and optical-trap rheometry: toward single molecule mechanobiology. <i>Journal of Biomedical Optics</i> , 2007 , 12, 014012	3.5	29
23	Induction of endoplasmic reticulum stress-induced beta-cell apoptosis and accumulation of polyubiquitinated proteins by human islet amyloid polypeptide. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2007 , 293, E1656-62	6	107
22	Direct evidence of attempted beta cell regeneration in an 89-year-old patient with recent-onset type 1 diabetes. <i>Diabetologia</i> , 2006 , 49, 1838-44	10.3	162
21	Increased islet beta cell replication adjacent to intrapancreatic gastrinomas in humans. <i>Diabetologia</i> , 2006 , 49, 2689-96	10.3	51
20	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. <i>Diabetologia</i> 49:1838-1844. <i>Diabetologia</i> , 2006 , 49, 2803-2804	10.3	3
19	The potential for stem cell therapy in diabetes. <i>Pediatric Research</i> , 2006 , 59, 65R-73R	3.2	45

18	Inhibition of human IAPP fibril formation does not prevent beta-cell death: evidence for distinct actions of oligomers and fibrils of human IAPP. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2006 , 291, E1317-24	6	130
17	Islet amyloid polypeptide (IAPP) transgenic rodents as models for type 2 diabetes. <i>ILAR Journal</i> , 2006 , 47, 225-33	1.7	106
16	Beta-cell deficit due to increased apoptosis in the human islet amyloid polypeptide transgenic (HIP) rat recapitulates the metabolic defects present in type 2 diabetes. <i>Diabetes</i> , 2006 , 55, 2106-14	0.9	123
15	Mechanisms of impaired fasting glucose and glucose intolerance induced by an approximate 50% pancreatectomy. <i>Diabetes</i> , 2006 , 55, 2347-56	0.9	66
14	Relationship between beta-cell mass and fasting blood glucose concentration in humans. <i>Diabetes Care</i> , 2006 , 29, 717-8	14.6	166
13	Activation of peroxisome proliferator-activated receptor-gamma by rosiglitazone protects human islet cells against human islet amyloid polypeptide toxicity by a phosphatidylinositol 3Rkinase-dependent pathway. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2005 , 90, 6678-86	5.6	86
12	Pulsatile insulin secretion dictates systemic insulin delivery by regulating hepatic insulin extraction in humans. <i>Diabetes</i> , 2005 , 54, 1649-56	0.9	175
11	Sustained beta cell apoptosis in patients with long-standing type 1 diabetes: indirect evidence for islet regeneration?. <i>Diabetologia</i> , 2005 , 48, 2221-8	10.3	393
10	Diabetes due to a progressive defect in beta-cell mass in rats transgenic for human islet amyloid polypeptide (HIP Rat): a new model for type 2 diabetes. <i>Diabetes</i> , 2004 , 53, 1509-16	0.9	217
9	Replication increases beta-cell vulnerability to human islet amyloid polypeptide-induced apoptosis. <i>Diabetes</i> , 2003 , 52, 1701-8	0.9	97
8	Glucose stimulates pulsatile insulin secretion from human pancreatic islets by increasing secretory burst mass: dose-response relationships. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2003 , 88, 742-7	5.6	46
7	Beta-cell deficit and increased beta-cell apoptosis in humans with type 2 diabetes. <i>Diabetes</i> , 2003 , 52, 102-10	0.9	3154
6	Increased beta-cell apoptosis prevents adaptive increase in beta-cell mass in mouse model of type 2 diabetes: evidence for role of islet amyloid formation rather than direct action of amyloid. <i>Diabetes</i> , 2003 , 52, 2304-14	0.9	344
5	Pulsatile insulin secretion: detection, regulation, and role in diabetes. <i>Diabetes</i> , 2002 , 51 Suppl 1, S245-54	0.9	156
4	Overnight inhibition of insulin secretion restores pulsatility and proinsulin/insulin ratio in type 2 diabetes. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2000 , 279, E520-8	6	93
3	Direct measurement of pulsatile insulin secretion from the portal vein in human subjects. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2000 , 85, 4491-9	5.6	113
2	Insulin Secretion in Type II Diabetes Mellitus 1997 , 119-136		8
1	Islet Amyloid Polypeptide (IAPP) and Insulin Secretion 1994 , 381-398		4

