# Peter C Butler

List of Publications by Year
in descending order

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|---|---|---|---|
| 110 papers | 13,674 citations | 41258 49 h-index | 25716 108 g-index |
| 112 all docs | 112 docs citations | 112 times ranked | 13639 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Â-Cell Deficit and Increased Â-Cell Apoptosis in Humans With Type 2 Diabetes. Diabetes, 2003, 52, 102-110. | 0.3 | 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. | 0.3 | 616 |
| 3 | Islet Amyloid in Type 2 Diabetes, and the Toxic Oligomer Hypothesis. Endocrine Reviews, 2008, 29, 303-316. | 8.9 | 541 |
| 4 | Sustained beta cell apoptosis in patients with long-standing type 1 diabetes: indirect evidence for islet regeneration?. Diabetologia, 2005, 48, 2221-2228. | 2.9 | 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. | 1.5 | 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. | 0.3 | 374 |
| 7 | Adaptive changes in pancreatic beta cell fractional area and beta cell turnover in human pregnancy. Diabetologia, 2010, 53, 2167-2176. | 2.9 | 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. | 0.3 | 362 |
| 9 | Î²-Cell Mass and Turnover in Humans. Diabetes Care, 2013, 36, 111-117. | 4.3 | 330 |
| 10 | A Critical Analysis of the Clinical Use of Incretin-Based Therapies. Diabetes Care, 2013, 36, 2118-2125. | 4.3 | 264 |
| 11 | Diabetes Due to a Progressive Defect in Â-Cell Mass in Rats Transgenic for Human Islet Amyloid Polypeptide (HIP Rat): A New Model for Type 2 Diabetes. Diabetes, 2004, 53, 1509-1516. | 0.3 | 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. | 2.9 | 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. | 0.3 | 222 |
| 14 | Evidence for Proteotoxicity in Î² Cells in Type 2 Diabetes. American Journal of Pathology, 2010, 176, 861-869. | 1.9 | 207 |
| 15 | Pulsatile Insulin Secretion Dictates Systemic Insulin Delivery by Regulating Hepatic Insulin Extraction In Humans. Diabetes, 2005, 54, 1649-1656. | 0.3 | 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. | 0.3 | 201 |
| 17 | Autophagy defends pancreatic Î² cells from human islet amyloid polypeptide-induced toxicity. Journal of Clinical Investigation, 2014, 124, 3489-3500. | 3.9 | 188 |
| 18 | Pulsatile insulin secretion, impaired glucose tolerance and type 2 diabetes. Molecular Aspects of Medicine, 2015, 42, 61-77. | 2.7 | 186 |

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|---|---|---|---|
| 19 | Relationship Between Â-Cell Mass and Fasting Blood Glucose Concentration in Humans. Diabetes Care, 2006, 29, 717-718. | 4.3 | 184 |
| 20 | Pulsatile Insulin Secretion: Detection, Regulation, and Role in Diabetes. Diabetes, 2002, 51, S245-S254. | 0.3 | 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. | 2.9 | 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. | 0.3 | 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. | 0.3 | 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. | 3.3 | 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. | 1.8 | 148 |
| 26 | Pulsatile Portal Vein Insulin Delivery Enhances Hepatic Insulin Action and Signaling. Diabetes, 2012, 61, 2269-2279. | 0.3 | 142 |
| 27 | Â-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. | 0.3 | 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. | 1.8 | 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. | 1.8 | 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. | 6.6 | 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. | 2.9 | 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. | 1.8 | 110 |
| 34 | Replication Increases Â-Cell Vulnerability to Human Islet Amyloid Polypeptide-Induced Apoptosis. Diabetes, 2003, 52, 1701-1708. | 0.3 | 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. | 1.8 | 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. | 0.3 | 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. | 0.3 | 103 |
| 38 | Achieving high permeability and enhanced selectivity for Angstrom-scale separations using artificial water channel membranes. Nature Communications, 2018, 9, 2294. | 5.8 | 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. | 1.8 | 94 |
| 40 | Pancreatic duct replication is increased with obesity and type 2 diabetes in humans. Diabetologia, 2010, 53, 21-26. | 2.9 | 87 |
| 41 | Successful Versus Failed Adaptation to High-Fat Dietâ€“Induced Insulin Resistance. Diabetes, 2009, 58, 906-916. | 0.3 | 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. | 1.4 | 83 |
| 43 | Relationship between pancreatic vesicular monoamine transporter 2 (VMAT2) and insulin expression in human pancreas. Journal of Molecular Histology, 2008, 39, 543-551. | 1.0 | 80 |
| 44 | Mechanisms of Impaired Fasting Glucose and Glucose Intolerance Induced by a Â50% Pancreatectomy. Diabetes, 2006, 55, 2347-2356. | 0.3 | 71 |
| 45 | Increased islet beta cell replication adjacent to intrapancreatic gastrinomas in humans. Diabetologia, 2006, 49, 2689-2696. | 2.9 | 62 |
| 46 | IAPP toxicity activates HIF1Î±/PFKFB3 signaling delaying Î²-cell loss at the expense of Î²-cell function. Nature Communications, 2019, 10, 2679. | 5.8 | 55 |
| 47 | UCHL1 deficiency exacerbates human islet amyloid polypeptide toxicity in Î²-cells. Autophagy, 2014, 10, 1004-1014. | 4.3 | 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. | 1.8 | 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. | 1.8 | 51 |
| 50 | The Potential for Stem Cell Therapy in Diabetes. Pediatric Research, 2006, 59, 65R-73R. | 1.1 | 50 |
| 51 | Increased Hormone-Negative Endocrine Cells in the Pancreas in Type 1 Diabetes. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 3487-3496. | 1.8 | 50 |
| 52 | Activation of the HIF1Î±/PFKFB3 stress response pathway in beta cells in type 1 diabetes. Diabetologia, 2020, 63, 149-161. | 2.9 | 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. | 1.8 | 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. | 0.3 | 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. | 0.3 | 44 |
| 56 | Beta cell nuclear musculoaponeurotic fibrosarcoma oncogene family A (MafA) is deficient in type 2 diabetes. Diabetologia, 2012, 55, 2985-2988. | 2.9 | 44 |
| 57 | Enhanced Diffusion of Passive Tracers in Active Enzyme Solutions. Nano Letters, 2017, 17, 4807-4812. | 4.5 | 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. | 1.6 | 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. | 11.1 | 38 |
| 61 | Mechanotransmission in endothelial cells subjected to oscillatory and multi-directional shear flow. Journal of the Royal Society Interface, 2017, 14, 20170185. | 1.5 | 37 |
| 62 | Integrated multimodal microscopy, time-resolved fluorescence, and optical-trap rheometry: toward single molecule mechanobiology. Journal of Biomedical Optics, 2007, 12, 014012. | 1.4 | 36 |
| 63 | Molecular Cloning, Overexpression and Characterization of a Novel Water Channel Protein from Rhodobacter sphaeroides. PLoS ONE, 2014, 9, e86830. | 1.1 | 30 |
| 64 | Relationship between fractional pancreatic beta cell area and fasting plasma glucose concentration in monkeys. Diabetologia, 2010, 53, 111-114. | 2.9 | 27 |
| 65 | Impulsive Enzymes: A New Force in Mechanobiology. Cellular and Molecular Bioengineering, 2015, 8, 106-118. | 1.0 | 27 |
| 66 | Cell cycleâ€“related metabolism and mitochondrial dynamics in a replication-competent pancreatic beta-cell line. Cell Cycle, 2017, 16, 2086-2099. | 1.3 | 27 |
| 67 | Visualizing insulin vesicle neighborhoods in Î² cells by cryoâ€“electron tomography. Science Advances, 2020, 6, . | 4.7 | 27 |
| 68 | Recovery of high-quality RNA from laser capture microdissected human and rodent pancreas. Journal of Histotechnology, 2016, 39, 59-65. | 0.2 | 26 |
| 69 | Insulin-Degrading Enzyme Inhibition, a Novel Therapy for Type 2 Diabetes?. Cell Metabolism, 2014, 20, 201-203. | 7.2 | 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. | 0.9 | 24 |
| 71 | Shear-induced force transmission in a multicomponent, multicell model of the endothelium. Journal of the Royal Society Interface, 2014, 11, 20140431. | 1.5 | 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. | 1.8 | 23 |
| 74 | Î²1-Integrin-Mediated Adhesion Is Lipid-Bilayer Dependent. Biophysical Journal, 2017, 113, 1080-1092. | 0.2 | 22 |
| 75 | Pancreatic Nonhormone Expressing Endocrine Cells in Children With Type 1 Diabetes. Journal of the Endocrine Society, 2017, 1, 385-395. | 0.1 | 22 |
| 76 | Annexin A5 Directly Interacts with Amyloidogenic Proteins and Reduces Their Toxicity. Biochemistry, 2009, 48, 10568-10576. | 1.2 | 19 |
| 77 | Increased Chromogranin Aâ€“Positive Hormone-Negative Cells in Chronic Pancreatitis. Journal of Clinical Endocrinology and Metabolism, 2018, 103, 2126-2135. | 1.8 | 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. | 2.0 | 19 |
| 79 | IAPP-induced beta cell stress recapitulates the islet transcriptome in type 2 diabetes. Diabetologia, 2022, 65, 173-187. | 2.9 | 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. | 1.8 | 18 |
| 81 | Î² Cellâ€“specific increased expression of calpastatin prevents diabetes induced by islet amyloid polypeptide toxicity. JCI Insight, 2016, 1, e89590. | 2.3 | 17 |
| 82 | Islet inflammation and ductal proliferation may be linked to increased pancreatitis risk in type 2 diabetes. JCI Insight, 2017, 2, . | 2.3 | 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. | 2.7 | 16 |
| 84 | The Î²-cell glucose toxicity hypothesis: Attractive but difficult to prove. Metabolism: Clinical and Experimental, 2021, 124, 154870. | 1.5 | 16 |
| 85 | Mechanobiology of the abluminal glycocalyx. Biorheology, 2019, 56, 101-112. | 1.2 | 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. | 1.8 | 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. | 2.9 | 12 |
| 88 | Using handgrip strength to screen for diabetes in developing countries. Journal of Medical Engineering and Technology, 2016, 40, 8-14. | 0.8 | 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. | 1.7 | 11 |
| 90 | Glucagon-like Peptide 1 Drugs as Second-line Therapy for Type 2 Diabetes. JAMA Internal Medicine, 2016, 176, 1440. | 2.6 | 9 |

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|---|---|---|---|
| 91 | Light-Driven Chloride Transport Kinetics of Halorhodopsin. Biophysical Journal, 2018, 115, 353-360. | 0.2 | 9 |
| 92 | Pregnancy in human IAPP transgenic mice recapitulates beta cell stress in type 2 diabetes. Diabetologia, 2019, 62, 1000-1010. | 2.9 | 9 |
| 93 | Pancreatic alpha-cell mass across adult human lifespan. European Journal of Endocrinology, 2020, 182, 219-231. | 1.9 | 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. | 0.1 | 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. | 2.9 | 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. | 0.1 | 7 |
| 98 | A transparent low intensity pulsed ultrasound (LIPUS) chip for high-throughput cell stimulation. Lab on A Chip, 2021, 21, 4734-4742. | 3.1 | 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. | 4.3 | 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, . | 3.9 | 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. | 1.8 | 4 |
| 103 | Lipid bilayer control of nascent adhesion formation. Biomedical Engineering Letters, 2015, 5, 172-180. | 2.1 | 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. | 1.6 | 4 |
| 105 | Liposome-based measurement of light-driven chloride transport kinetics of halorhodopsin. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183637. | 1.4 | 4 |
| 106 | Evaluation of immunohistochemical staining for glucagon in human pancreatic tissue. Journal of Histotechnology, 2016, 39, 8-16. | 0.2 | 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. | 0.2 | 2 |
| 108 | Supplying Insulin while Evading Immunity. New England Journal of Medicine, 2021, 384, 967-969. | 13.9 | 1 |

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|---|---|---|---|
| 109 | Farewell Statement From Dr. Peter Butler as Outgoing Editor in Chief of Diabetes. Diabetes, 2011, 60, 3099-3099. | 0.3 | 0 |
| 110 | Insulin Secretion. , 2010, , 624-635. | | 0 |