Jean-Christophe Jonas

List of Publications by Year
in descending order

84 papers	6,476 citations	81839 39 h-index	64755 79 g-index
85 all docs	85 docs citations	85 times ranked	7301 citing authors

#	Article	IF	Citations
1	Mechanisms of Pancreatic Â-Cell Death in Type 1 and Type 2 Diabetes: Many Differences, Few Similarities. Diabetes, 2005, 54, S97-S107.	0.3	1,296
2	Chronic Hyperglycemia Triggers Loss of Pancreatic Î² Cell Differentiation in an Animal Model of Diabetes. Journal of Biological Chemistry, 1999, 274, 14112-14121.	1.6	495
3	The molecular mechanisms of pancreatic Î²-cell glucotoxicity: Recent findings and future research directions. Molecular and Cellular Endocrinology, 2012, 364, 1-27.	1.6	229
4	Induction of Adiponectin in Skeletal Muscle by Inflammatory Cytokines:in Vivoandin VitroStudies. Endocrinology, 2004, 145, 5589-5597.	1.4	200
5	Increased Expression of Antioxidant and Antiapoptotic Genes in Islets That May Contribute to Â-Cell Survival During Chronic Hyperglycemia. Diabetes, 2002, 51, 413-423.	0.3	183
6	Mechanisms of Î²-cell dedifferentiation in diabetes: recent findings and future research directions. Journal of Endocrinology, 2018, 236, R109-R143.	1.2	168
7	Signals and Pools Underlying Biphasic Insulin Secretion. Diabetes, 2002, 51, S60-S67.	0.3	161
8	Hierarchy of the Î²-cell signals controlling insulin secretion. European Journal of Clinical Investigation, 2003, 33, 742-750.	1.7	151
9	MicroRNAs contribute to compensatory Î² cell expansion during pregnancy and obesity. Journal of Clinical Investigation, 2012, 122, 3541-3551.	3.9	148
10	Control Mechanisms of the Oscillations of Insulin Secretion In Vitro and In Vivo. Diabetes, 2002, 51, S144-S151.	0.3	147
11	Adaptation of Î²-cell mass to substrate oversupply: enhanced function with normal gene expression. American Journal of Physiology - Endocrinology and Metabolism, 2001, 280, E788-E796.	1.8	135
12	Acute nutrient regulation of the unfolded protein response and integrated stress response in cultured rat pancreatic islets. Diabetologia, 2007, 50, 1442-1452.	2.9	132
13	Glucose regulation of islet stress responses and Î²â€cell failure in type 2 diabetes. Diabetes, Obesity and Metabolism, 2009, 11, 65-81.	2.2	111
14	Possible links between glucose-induced changes in the energy state of pancreatic B cells and insulin release. Unmasking by decreasing a stable pool of adenine nucleotides in mouse islets.. Journal of Clinical Investigation, 1995, 96, 1738-1745.	3.9	105
15	Influence of cell number on the characteristics and synchrony of Ca2+oscillations in clusters of mouse pancreatic islet cells. Journal of Physiology, 1999, 520, 839-849.	1.3	104
16	Glucose-induced mixed [Ca2+]c oscillations in mouse Î²-cells are controlled by the membrane potential and the SERCA3 Ca2+-ATPase of the endoplasmic reticulum. American Journal of Physiology - Cell Physiology, 2006, 290, C1503-C1511.	2.1	102
17	Cluster analysis of rat pancreatic islet gene mRNA levels after culture in low-, intermediate- and high-glucose concentrations. Diabetologia, 2009, 52, 463-476.	2.9	101
18	High Glucose Stimulates Early Response Gene c-Myc Expression in Rat Pancreatic Î² Cells. Journal of Biological Chemistry, 2001, 276, 35375-35381.	1.6	99

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19	Imidazoline antagonists of Î±₂â€adrenoceptors increase insulin release <i>in vitro</i> by inhibiting ATPâ€sensitive K⁺ channels in pancreatic Î²â€cells. British Journal of Pharmacology, 1992, 107, 8-14.	2.7	95
20	Pancreatic Î²-cell tRNA hypomethylation and fragmentation link TRMT10A deficiency with diabetes. Nucleic Acids Research, 2018, 46, 10302-10318.	6.5	93
21	Increased glucose sensitivity of both triggering and amplifying pathways of insulin secretion in rat islets cultured for 1 wk in high glucose. American Journal of Physiology - Endocrinology and Metabolism, 2004, 287, E207-E217.	1.8	91
22	GENE EXPRESSION OF VEGF AND ITS RECEPTORS Flk-1/KDR AND Flt-1 IN CULTURED AND TRANSPLANTED RAT ISLETS1. Transplantation, 2001, 71, 924-935.	0.5	89
23	SERCA3 Ablation Does Not Impair Insulin Secretion but Suggests Distinct Roles of Different Sarcoendoplasmic Reticulum Ca2+ Pumps for Ca2+ Homeostasis in Pancreatic Â-cells. Diabetes, 2002, 51, 3245-3253.	0.3	87
24	Mechanisms of Control of the Free Ca2+ Concentration in the Endoplasmic Reticulum of Mouse Pancreatic Î²-Cells. Diabetes, 2011, 60, 2533-2545.	0.3	85
25	Multiple effects and stimulation of insulin secretion by the tyrosine kinase inhibitor genistein in normal mouse islets. British Journal of Pharmacology, 1995, 114, 872-880.	2.7	80
26	Glucose-Induced O2 Consumption Activates Hypoxia Inducible Factors 1 and 2 in Rat Insulin-Secreting Pancreatic Beta-Cells. PLoS ONE, 2012, 7, e29807.	1.1	80
27	Corticosteroids Induce Expression of Aquaporin-1 and Increase Transcellular Water Transport in Rat Peritoneum. Journal of the American Society of Nephrology: JASN, 2003, 14, 555-565.	3.0	77
28	Dynamic measurements of mitochondrial hydrogen peroxide concentration and glutathione redox state in rat pancreatic Î²-cells using ratiometric fluorescent proteins: confounding effects of pH with HyPer but not roGFP1. Biochemical Journal, 2012, 441, 971-978.	1.7	74
29	Prolonged culture in low glucose induces apoptosis of rat pancreatic Î²-cells through induction of c-myc. Biochemical and Biophysical Research Communications, 2003, 312, 937-944.	1.0	73
30	Adenylyl cyclase 8 is central to glucagon-like peptide 1 signalling and effects of chronically elevated glucose in rat and human pancreatic beta cells. Diabetologia, 2011, 54, 390-402.	2.9	69
31	High glucose and hydrogen peroxide increase c-Myc and haeme-oxygenase 1 mRNA levels in rat pancreatic islets without activating NF?B. Diabetologia, 2005, 48, 496-505.	2.9	63
32	HDLs Protect Pancreatic Î²-Cells Against ER Stress by Restoring Protein Folding and Trafficking. Diabetes, 2012, 61, 1100-1111.	0.3	63
33	Unveiling a common mechanism of apoptosis in Î²-cells and neurons in Friedreich's ataxia. Human Molecular Genetics, 2015, 24, 2274-2286.	1.4	58
34	Hypoxia reduces ER-to-Golgi protein trafficking and increases cell death by inhibiting the adaptive unfolded protein response in mouse beta cells. Diabetologia, 2016, 59, 1492-1502.	2.9	58
35	Nutrient Metabolism, Subcellular Redox State, and Oxidative Stress in Pancreatic Islets and Î²-Cells. Journal of Molecular Biology, 2020, 432, 1461-1493.	2.0	56
36	Temporal and quantitative correlations between insulin secretion and stably elevated or oscillatory cytoplasmic Ca2+ in mouse pancreatic beta-cells. Diabetes, 1998, 47, 1266-1273.	0.3	56

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37	Probe-Independent and Direct Quantification of Insulin mRNA and Growth Hormone mRNA in Enriched Cell Preparations. Diabetes, 2006, 55, 3214-3220.	0.3	52
38	Dynamics of Ca2+ and guanosine 5â€²-[<i>Î³</i>-thio]triphosphate action on insulin secretion from Î±-toxin-permeabilized HIT-T15 cells. Biochemical Journal, 1994, 301, 523-529.	1.7	51
39	Haeme-oxygenase 1 expression in rat pancreatic beta cells is stimulated by supraphysiological glucose concentrations and by cyclic AMP. Diabetologia, 2003, 46, 1234-1244.	2.9	51
40	Glucolipotoxic conditions induce Î²-cell iron import, cytosolic ROS formation and apoptosis. Journal of Molecular Endocrinology, 2018, 61, 69-77.	1.1	44
41	Clonidine inhibits ATPâ€sensitive K⁺channels in mouse pancreatic Î²â€cells. British Journal of Pharmacology, 1991, 104, 385-390.	2.7	40
42	The Islet Estrogen Receptor-Î± Is Induced by Hyperglycemia and Protects Against Oxidative Stress-Induced Insulin-Deficient Diabetes. PLoS ONE, 2014, 9, e87941.	1.1	40
43	Inhibition of aquaporin-1 prevents myocardial remodeling by blocking the transmembrane transport of hydrogen peroxide. Science Translational Medicine, 2020, 12, .	5.8	39
44	Exenatide induces frataxin expression and improves mitochondrial function in Friedreich ataxia. JCI Insight, 2020, 5, .	2.3	39
45	Protective Antioxidant and Antiapoptotic Effects of ZnCl2 in Rat Pancreatic Islets Cultured in Low and High Glucose Concentrations. PLoS ONE, 2012, 7, e46831.	1.1	38
46	Sulphonylureas do not increase insulin secretion by a mechanism other than a rise in cytoplasmic Ca2+ in pancreatic B-cells. European Journal of Pharmacology, 1996, 298, 279-286.	1.7	35
47	NNT reverse mode of operation mediates glucose control of mitochondrial NADPH and glutathione redox state in mouse pancreatic Î²-cells. Molecular Metabolism, 2017, 6, 535-547.	3.0	35
48	Somatostatin Is Only Partly Required for the Glucagonostatic Effect of Glucose but Is Necessary for the Glucagonostatic Effect of KATP Channel Blockers. Diabetes, 2018, 67, 2239-2253.	0.3	33
49	Expression of Ca ²⁺ Transport Genes in Platelets and Endothelial Cells in Hypertension. Hypertension, 2001, 37, 135-141.	1.3	31
50	Acute nutrient regulation of the mitochondrial glutathione redox state in pancreatic Î²-cells. Biochemical Journal, 2014, 460, 411-423.	1.7	30
51	Mitochondrial oxidative stress contributes differently to rat pancreatic islet cell apoptosis and insulin secretory defects after prolonged culture in a low non-stimulating glucose concentration. Diabetologia, 2012, 55, 2226-2237.	2.9	29
52	Increased Glucose Sensitivity of Stimulus-Secretion Coupling in Islets From Psammomys obesus After Diet Induction of Diabetes. Diabetes, 2002, 51, 2552-2560.	0.3	27
53	Atypical Ca2+-induced Ca2+release from a sarco-endoplasmic reticulum Ca2+-ATPase 3-dependent Ca2+pool in mouse pancreatic Î²-cells. Journal of Physiology, 2004, 559, 141-156.	1.3	27
54	Stable and diffusible pools of nucleotides in pancreatic islet cells. Endocrinology, 1996, 137, 4671-4676.	1.4	27

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55	Aspalathin Protects Insulinâ€Producing Î² Cells against Glucotoxicity and Oxidative Stressâ€Induced Cell Death. Molecular Nutrition and Food Research, 2020, 64, e1901009.	1.5	26
56	Do Oscillations of Insulin Secretion Occur in the Absence of Cytoplasmic Ca2+ Oscillations in Â-Cells?. Diabetes, 2002, 51, S177-S182.	0.3	24
57	NADPH oxidase-2 does not contribute to Î²-cell glucotoxicity in cultured pancreatic islets from C57BL/6J mice. Molecular and Cellular Endocrinology, 2017, 439, 354-362.	1.6	24
58	Mitochondrial regulation of insulin production in rat pancreatic islets. Diabetologia, 2005, 48, 1549-1559.	2.9	21
59	Effects of fructosamine-3-kinase deficiency on function and survival of mouse pancreatic islets after prolonged culture in high glucose or ribose concentrations. American Journal of Physiology - Endocrinology and Metabolism, 2010, 298, E586-E596.	1.8	21
60	Glucose Acutely Reduces Cytosolic and Mitochondrial H₂O₂in Rat Pancreatic Beta Cells. Antioxidants and Redox Signaling, 2019, 30, 297-313.	2.5	21
61	Glucose-induced Cytosolic pH Changes in Î²-Cells and Insulin Secretion Are Not Causally Related. Journal of Biological Chemistry, 2007, 282, 24538-24546.	1.6	20
62	Effects of c-MYC activation on glucose stimulus-secretion coupling events in mouse pancreatic islets. American Journal of Physiology - Endocrinology and Metabolism, 2008, 295, E92-E102.	1.8	20
63	Prenylcysteine analogs mimicking the C-terminus of GTP-binding proteins stimulate exocytosis from permeabilized HIT-T15 cells: comparison with the effect of Rab3AL peptide. Biochimica Et Biophysica Acta - Molecular Cell Research, 1995, 1268, 269-278.	1.9	19
64	Antioxidants N-acetyl-l-cysteine and manganese(III)tetrakis (4-benzoic acid)porphyrin do not prevent Î²-cell dysfunction in rat islets cultured in high glucose for 1 wk. American Journal of Physiology - Endocrinology and Metabolism, 2006, 291, E137-E146.	1.8	17
65	Possible involvement of a tyrosine kinase-dependent pathway in the regulation of phosphoinositide metabolism by vanadate in normal mouse islets. Biochemical Journal, 1996, 315, 49-55.	1.7	16
66	Glucokinase activation is beneficial or toxic to cultured rat pancreatic islets depending on the prevailing glucose concentration. American Journal of Physiology - Endocrinology and Metabolism, 2015, 309, E632-E639.	1.8	16
67	Metallothionein 1 negatively regulates glucose-stimulated insulin secretion and is differentially expressed in conditions of beta cell compensation and failure in mice and humans. Diabetologia, 2019, 62, 2273-2286.	2.9	16
68	Phlda3 regulates beta cell survival during stress. Scientific Reports, 2019, 9, 12827.	1.6	16
69	The imidazoline SL 84.0418 shows stereoselectivity in blocking Î±2-adrenoceptors but not ATP-sensitive K+ channels in pancreatic B-cells. European Journal of Pharmacology, 1994, 264, 81-84.	1.7	14
70	In vitro stimulation of insulin release by SL 84.0418, a new Î±2-adrenoceptor antagonist. European Journal of Pharmacology, 1994, 254, 27-33.	1.7	13
71	Identification and subcellular localization of the Na+/H+ exchanger and a novel related protein in the endocrine pancreas and adrenal medulla. Journal of Molecular Endocrinology, 2007, 38, 409-422.	1.1	13
72	Role of activating transcription factor 3 in low glucose- and thapsigargin-induced apoptosis in cultured mouse islets. Biochemical and Biophysical Research Communications, 2011, 415, 294-299.	1.0	11

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73	Glucose Regulates Expression of Inositol 1,4,5-Trisphosphate Receptor Isoforms in Isolated Rat Pancreatic Islets. Endocrinology, 1999, 140, 2173-2182.	1.4	10
74	Biomarkers of tumour redox status in response to modulations of glutathione and thioredoxin antioxidant pathways. Free Radical Research, 2018, 52, 256-266.	1.5	8
75	Emerging Roles of Metallothioneins in Beta Cell Pathophysiology: Beyond and above Metal Homeostasis and Antioxidant Response. Biology, 2021, 10, 176.	1.3	8
76	Endoplasmic reticulum accumulation of Kir6.2 without activation of ER stress response in islet cells from adult Sur1 knockout mice. Cell and Tissue Research, 2010, 340, 335-346.	1.5	7
77	Proof-of-concept for 2D/CT element analysis of entire cryofrozen islets of Langerhans using a cryoloop synchrotron X-ray fluorescence setup. Journal of Analytical Atomic Spectrometry, 2020, 35, 1368-1379.	1.6	7
78	The lack of functional nicotinamide nucleotide transhydrogenase only moderately contributes to the impairment of glucose tolerance and glucose-stimulated insulin secretion in C57BL/6J vs C57BL/6N mice. Diabetologia, 2021, 64, 2550-2561.	2.9	7
79	Culture duration and conditions affect the oscillations of cytoplasmic calcium concentration induced by glucose in mouse pancreatic islets. Diabetologia, 1994, 37, 1007-1014.	2.9	7
80	Transcriptome analysis of islets from diabetesâ€resistant and diabetesâ€prone obese mice reveals novel gene regulatory networks involved in betaâ€cell compensation and failure. FASEB Journal, 2021, 35, e21608.	0.2	6
81	Signal Transduction. Advances in Molecular and Cell Biology, 1999, , 247-275.	0.1	3
82	mRNA profiling of pancreatic beta-cells: investigating mechanisms of diabetes. , 2001, , 187-211.		2
83	Physiological ER Stress: The Model of Insulin-Secreting Pancreatic b-Cells. , 2012, , 185-211.		1
84	Editorial Overview: â€œIslet Biology in Type 2 Diabetesâ€. Journal of Molecular Biology, 2020, 432, 1307-1309.	2.0	0