

Jean-Christophe Jonas

List of Publications by Citations

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83
papers

5,399
citations

38
h-index

73
g-index

85
ext. papers

5,913
ext. citations

5.8
avg, IF

5.34
L-index

#	Paper	IF	Citations
83	Mechanisms of pancreatic beta-cell death in type 1 and type 2 diabetes: many differences, few similarities. <i>Diabetes</i> , 2005 , 54 Suppl 2, S97-107	0.9	1121
82	Chronic hyperglycemia triggers loss of pancreatic beta cell differentiation in an animal model of diabetes. <i>Journal of Biological Chemistry</i> , 1999 , 274, 14112-21	5.4	424
81	The molecular mechanisms of pancreatic β cell glucotoxicity: recent findings and future research directions. <i>Molecular and Cellular Endocrinology</i> , 2012 , 364, 1-27	4.4	193
80	Induction of adiponectin in skeletal muscle by inflammatory cytokines: in vivo and in vitro studies. <i>Endocrinology</i> , 2004 , 145, 5589-97	4.8	176
79	Increased expression of antioxidant and antiapoptotic genes in islets that may contribute to beta-cell survival during chronic hyperglycemia. <i>Diabetes</i> , 2002 , 51, 413-23	0.9	159
78	Hierarchy of the beta-cell signals controlling insulin secretion. <i>European Journal of Clinical Investigation</i> , 2003 , 33, 742-50	4.6	139
77	Signals and pools underlying biphasic insulin secretion. <i>Diabetes</i> , 2002 , 51 Suppl 1, S60-7	0.9	132
76	Control mechanisms of the oscillations of insulin secretion in vitro and in vivo. <i>Diabetes</i> , 2002 , 51 Suppl 1, S144-51	0.9	129
75	MicroRNAs contribute to compensatory β cell expansion during pregnancy and obesity. <i>Journal of Clinical Investigation</i> , 2012 , 122, 3541-51	15.9	122
74	Adaptation of beta-cell mass to substrate oversupply: enhanced function with normal gene expression. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2001 , 280, E788-96	6	121
73	Acute nutrient regulation of the unfolded protein response and integrated stress response in cultured rat pancreatic islets. <i>Diabetologia</i> , 2007 , 50, 1442-52	10.3	119
72	Mechanisms of β cell dedifferentiation in diabetes: recent findings and future research directions. <i>Journal of Endocrinology</i> , 2018 , 236, R109-R143	4.7	105
71	Glucose regulation of islet stress responses and beta-cell failure in type 2 diabetes. <i>Diabetes, Obesity and Metabolism</i> , 2009 , 11 Suppl 4, 65-81	6.7	96
70	Influence of cell number on the characteristics and synchrony of Ca^{2+} oscillations in clusters of mouse pancreatic islet cells. <i>Journal of Physiology</i> , 1999 , 520 Pt 3, 839-49	3.9	93
69	Cluster analysis of rat pancreatic islet gene mRNA levels after culture in low-, intermediate- and high-glucose concentrations. <i>Diabetologia</i> , 2009 , 52, 463-76	10.3	92
68	Glucose-induced mixed $[Ca^{2+}]_i$ oscillations in mouse beta-cells are controlled by the membrane potential and the SERCA3 Ca^{2+} -ATPase of the endoplasmic reticulum. <i>American Journal of Physiology - Cell Physiology</i> , 2006 , 290, C1503-11	5.4	88
67	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. <i>Journal of Clinical Investigation</i> , 1995 , 96, 1738-45	15.9	88

66	Imidazoline antagonists of alpha 2-adrenoceptors increase insulin release in vitro by inhibiting ATP-sensitive K ⁺ channels in pancreatic beta-cells. <i>British Journal of Pharmacology</i> , 1992 , 107, 8-14	8.6	84
65	Gene expression of VEGF and its receptors Flk-1/KDR and Flt-1 in cultured and transplanted rat islets. <i>Transplantation</i> , 2001 , 71, 924-35	1.8	83
64	High glucose stimulates early response gene c-Myc expression in rat pancreatic beta cells. <i>Journal of Biological Chemistry</i> , 2001 , 276, 35375-81	5.4	82
63	Increased glucose sensitivity of both triggering and amplifying pathways of insulin secretion in rat islets cultured for 1 wk in high glucose. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2004 , 287, E207-17	6	81
62	SERCA3 ablation does not impair insulin secretion but suggests distinct roles of different sarcoendoplasmic reticulum Ca(2+) pumps for Ca(2+) homeostasis in pancreatic beta-cells. <i>Diabetes</i> , 2002 , 51, 3245-53	0.9	75
61	Glucose-induced O ₂ consumption activates hypoxia inducible factors 1 and 2 in rat insulin-secreting pancreatic beta-cells. <i>PLoS ONE</i> , 2012 , 7, e29807	3.7	71
60	Prolonged culture in low glucose induces apoptosis of rat pancreatic beta-cells through induction of c-myc. <i>Biochemical and Biophysical Research Communications</i> , 2003 , 312, 937-44	3.4	70
59	Mechanisms of control of the free Ca ²⁺ concentration in the endoplasmic reticulum of mouse pancreatic β-cells: interplay with cell metabolism and [Ca ²⁺] _i and role of SERCA2b and SERCA3. <i>Diabetes</i> , 2011 , 60, 2533-45	0.9	67
58	Dynamic measurements of mitochondrial hydrogen peroxide concentration and glutathione redox state in rat pancreatic β-cells using ratiometric fluorescent proteins: confounding effects of pH with HyPer but not roGFP1. <i>Biochemical Journal</i> , 2012 , 441, 971-8	3.8	66
57	Multiple effects and stimulation of insulin secretion by the tyrosine kinase inhibitor genistein in normal mouse islets. <i>British Journal of Pharmacology</i> , 1995 , 114, 872-80	8.6	65
56	Corticosteroids induce expression of aquaporin-1 and increase transcellular water transport in rat peritoneum. <i>Journal of the American Society of Nephrology: JASN</i> , 2003 , 14, 555-65	12.7	64
55	Adenylyl cyclase 8 is central to glucagon-like peptide 1 signalling and effects of chronically elevated glucose in rat and human pancreatic beta cells. <i>Diabetologia</i> , 2011 , 54, 390-402	10.3	60
54	High glucose and hydrogen peroxide increase c-Myc and haeme-oxygenase 1 mRNA levels in rat pancreatic islets without activating NFκB. <i>Diabetologia</i> , 2005 , 48, 496-505	10.3	55
53	Temporal and quantitative correlations between insulin secretion and stably elevated or oscillatory cytoplasmic Ca ²⁺ in mouse pancreatic beta-cells. <i>Diabetes</i> , 1998 , 47, 1266-1273	0.9	54
52	HDLs protect pancreatic β-cells against ER stress by restoring protein folding and trafficking. <i>Diabetes</i> , 2012 , 61, 1100-11	0.9	49
51	Unveiling a common mechanism of apoptosis in β-cells and neurons in Friedreich's ataxia. <i>Human Molecular Genetics</i> , 2015 , 24, 2274-86	5.6	47
50	Probe-independent and direct quantification of insulin mRNA and growth hormone mRNA in enriched cell preparations. <i>Diabetes</i> , 2006 , 55, 3214-20	0.9	47
49	Haeme-oxygenase 1 expression in rat pancreatic beta cells is stimulated by supraphysiological glucose concentrations and by cyclic AMP. <i>Diabetologia</i> , 2003 , 46, 1234-44	10.3	45

48	Dynamics of Ca ²⁺ and guanosine 5S[gamma-thio]triphosphate action on insulin secretion from alpha-toxin-permeabilized HIT-T15 cells. <i>Biochemical Journal</i> , 1994 , 301 (Pt 2), 523-9	3.8	45
47	Hypoxia reduces ER-to-Golgi protein trafficking and increases cell death by inhibiting the adaptive unfolded protein response in mouse beta cells. <i>Diabetologia</i> , 2016 , 59, 1492-1502	10.3	45
46	Pancreatic βcell tRNA hypomethylation and fragmentation link TRMT10A deficiency with diabetes. <i>Nucleic Acids Research</i> , 2018 , 46, 10302-10318	20.1	42
45	Clonidine inhibits ATP-sensitive K ⁺ channels in mouse pancreatic beta-cells. <i>British Journal of Pharmacology</i> , 1991 , 104, 385-90	8.6	35
44	Protective antioxidant and antiapoptotic effects of ZnCl ₂ in rat pancreatic islets cultured in low and high glucose concentrations. <i>PLoS ONE</i> , 2012 , 7, e46831	3.7	33
43	The islet estrogen receptor-βs induced by hyperglycemia and protects βs against oxidative stress-induced insulin-deficient diabetes. <i>PLoS ONE</i> , 2014 , 9, e87941	3.7	32
42	Nutrient Metabolism, Subcellular Redox State, and Oxidative Stress in Pancreatic Islets and βCells. <i>Journal of Molecular Biology</i> , 2020 , 432, 1461-1493	6.5	29
41	Acute nutrient regulation of the mitochondrial glutathione redox state in pancreatic βcells. <i>Biochemical Journal</i> , 2014 , 460, 411-23	3.8	28
40	Expression of Ca(2+) Transport Genes in Platelets and Endothelial Cells in Hypertension. <i>Hypertension</i> , 2001 , 37, 135-141	8.5	28
39	Sulphonylureas do not increase insulin secretion by a mechanism other than a rise in cytoplasmic Ca ²⁺ in pancreatic B-cells. <i>European Journal of Pharmacology</i> , 1996 , 298, 279-86	5.3	28
38	NNT reverse mode of operation mediates glucose control of mitochondrial NADPH and glutathione redox state in mouse pancreatic βcells. <i>Molecular Metabolism</i> , 2017 , 6, 535-547	8.8	26
37	Atypical Ca ²⁺ -induced Ca ²⁺ release from a sarco-endoplasmic reticulum Ca ²⁺ -ATPase 3-dependent Ca ²⁺ pool in mouse pancreatic beta-cells. <i>Journal of Physiology</i> , 2004 , 559, 141-56	3.9	26
36	Stable and diffusible pools of nucleotides in pancreatic islet cells		26
35	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. <i>Diabetologia</i> , 2012 , 55, 2226-37	10.3	25
34	Somatostatin Is Only Partly Required for the Glucagonostatic Effect of Glucose but Is Necessary for the Glucagonostatic Effect of K Channel Blockers. <i>Diabetes</i> , 2018 , 67, 2239-2253	0.9	23
33	Increased glucose sensitivity of stimulus-secretion coupling in islets from Psammomys obesus after diet induction of diabetes. <i>Diabetes</i> , 2002 , 51, 2552-60	0.9	23
32	Exenatide induces frataxin expression and improves mitochondrial function in Friedreich ataxia. <i>JCI Insight</i> , 2020 , 5,	9.9	23
31	Glucolipotoxic conditions induce βcell iron import, cytosolic ROS formation and apoptosis. <i>Journal of Molecular Endocrinology</i> , 2018 , 61, 69-77	4.5	19

30	Effects of fructosamine-3-kinase deficiency on function and survival of mouse pancreatic islets after prolonged culture in high glucose or ribose concentrations. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2010 , 298, E586-96	6	18
29	Do oscillations of insulin secretion occur in the absence of cytoplasmic Ca ²⁺ oscillations in beta-cells?. <i>Diabetes</i> , 2002 , 51 Suppl 1, S177-82	0.9	18
28	Inhibition of aquaporin-1 prevents myocardial remodeling by blocking the transmembrane transport of hydrogen peroxide. <i>Science Translational Medicine</i> , 2020 , 12,	17.5	18
27	NADPH oxidase-2 does not contribute to β-cell glucotoxicity in cultured pancreatic islets from C57BL/6J mice. <i>Molecular and Cellular Endocrinology</i> , 2017 , 439, 354-362	4.4	17
26	Mitochondrial regulation of insulin production in rat pancreatic islets. <i>Diabetologia</i> , 2005 , 48, 1549-59	10.3	17
25	Effects of c-MYC activation on glucose stimulus-secretion coupling events in mouse pancreatic islets. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2008 , 295, E92-102	6	16
24	Possible involvement of a tyrosine kinase-dependent pathway in the regulation of phosphoinositide metabolism by vanadate in normal mouse islets. <i>Biochemical Journal</i> , 1996 , 315 (Pt 1), 49-55	3.8	16
23	Glucokinase activation is beneficial or toxic to cultured rat pancreatic islets depending on the prevailing glucose concentration. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2015 , 309, E632-9	6	15
22	Prenylcysteine analogs mimicking the C-terminus of GTP-binding proteins stimulate exocytosis from permeabilized HIT-T15 cells: comparison with the effect of Rab3AL peptide. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 1995 , 1268, 269-78	4.9	15
21	Antioxidants N-acetyl-L-cysteine and manganese(III)tetrakis (4-benzoic acid)porphyrin do not prevent beta-cell dysfunction in rat islets cultured in high glucose for 1 wk. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2006 , 291, E137-46	6	14
20	Glucose-induced cytosolic pH changes in beta-cells and insulin secretion are not causally related: studies in islets lacking the Na ⁺ /H ⁺ exchanger NHE1. <i>Journal of Biological Chemistry</i> , 2007 , 282, 24538-46	5.4	14
19	Aspalathin Protects Insulin-Producing β Cells against Glucotoxicity and Oxidative Stress-Induced Cell Death. <i>Molecular Nutrition and Food Research</i> , 2020 , 64, e1901009	5.9	13
18	Identification and subcellular localization of the Na ⁺ /H ⁺ exchanger and a novel related protein in the endocrine pancreas and adrenal medulla. <i>Journal of Molecular Endocrinology</i> , 2007 , 38, 409-22	4.5	13
17	The imidazoline SL 84.0418 shows stereoselectivity in blocking alpha 2-adrenoceptors but not ATP-sensitive K ⁺ channels in pancreatic B-cells. <i>European Journal of Pharmacology</i> , 1994 , 264, 81-4	5.3	13
16	In vitro stimulation of insulin release by SL 84.0418, a new alpha 2-adrenoceptor antagonist. <i>European Journal of Pharmacology</i> , 1994 , 254, 27-33	5.3	12
15	Glucose Acutely Reduces Cytosolic and Mitochondrial HO in Rat Pancreatic Beta Cells. <i>Antioxidants and Redox Signaling</i> , 2019 , 30, 297-313	8.4	10
14	Glucose Regulates Expression of Inositol 1,4,5-Trisphosphate Receptor Isoforms in Isolated Rat Pancreatic Islets		10
13	Role of activating transcription factor 3 in low glucose- and thapsigargin-induced apoptosis in cultured mouse islets. <i>Biochemical and Biophysical Research Communications</i> , 2011 , 415, 294-9	3.4	9

12	Phlda3 regulates beta cell survival during stress. <i>Scientific Reports</i> , 2019 , 9, 12827	4.9	8
11	Biomarkers of tumour redox status in response to modulations of glutathione and thioredoxin antioxidant pathways. <i>Free Radical Research</i> , 2018 , 52, 256-266	4	8
10	Endoplasmic reticulum accumulation of Kir6.2 without activation of ER stress response in islet cells from adult Sur1 knockout mice. <i>Cell and Tissue Research</i> , 2010 , 340, 335-46	4.2	7
9	Metallothionein 1 negatively regulates glucose-stimulated insulin secretion and is differentially expressed in conditions of beta cell compensation and failure in mice and humans. <i>Diabetologia</i> , 2019 , 62, 2273-2286	10.3	5
8	Proof-of-concept for 2D/CT element analysis of entire cryofrozen islets of Langerhans using a cryoloop synchrotron X-ray fluorescence setup. <i>Journal of Analytical Atomic Spectrometry</i> , 2020 , 35, 1368-1379 ³	3.7	3
7	Signal Transduction. <i>Advances in Molecular and Cell Biology</i> , 1999 , 247-275		3
6	Emerging Roles of Metallothioneins in Beta Cell Pathophysiology: Beyond and Above Metal Homeostasis and Antioxidant Response. <i>Biology</i> , 2021 , 10,	4.9	3
5	mRNA profiling of pancreatic beta-cells: investigating mechanisms of diabetes 2001 , 187-211		2
4	Physiological ER Stress: The Model of Insulin-Secreting Pancreatic b-Cells 2012 , 185-211		1
3	Transcriptome analysis of islets from diabetes-resistant and diabetes-prone obese mice reveals novel gene regulatory networks involved in beta-cell compensation and failure. <i>FASEB Journal</i> , 2021 , 35, e21608	0.9	1
2	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. <i>Diabetologia</i> , 2021 , 64, 2550-2561	10.3	1
1	Culture duration and conditions affect the oscillations of cytoplasmic calcium concentration induced by glucose in mouse pancreatic islets. <i>Diabetologia</i> , 1994 , 37, 1007-1014	10.3	1