Sigurd Lenzen

List of Publications by Year
in descending order

83 papers	4,758 citations	147801 31 h-index	98798 67 g-index
86 all docs	86 docs citations	86 times ranked	5945 citing authors

#	Article	IF	Citations
1	Advanced Glycation End-Products (AGEs) of Lysine and Effects of Anti-TCR/Anti-TNF-Î± Antibody-Based Therapy in the LEW.1AR1-iddm Rat, an Animal Model of Human Type 1 Diabetes. International Journal of Molecular Sciences, 2022, 23, 1541.	4.1	1
2	Differential effects of saturated and unsaturated free fatty acids on ferroptosis in rat Î²-cells. Journal of Nutritional Biochemistry, 2022, 106, 109013.	4.2	20
3	The pro-radical hydrogen peroxide as a stable hydroxyl radical distributor: lessons from pancreatic beta cells. Archives of Toxicology, 2022, 96, 1915-1920.	4.2	13
4	The pancreatic beta cell: an intricate relation between anatomical structure, the signalling mechanism of glucose-induced insulin secretion, the low antioxidative defence, the high vulnerability and sensitivity to diabetic stress. ChemTexts, 2021, 7, 1.	1.9	9
5	The central role of glutathione peroxidase 4 in the regulation of ferroptosis and its implications for pro-inflammatory cytokine-mediated beta-cell death. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2021, 1867, 166114.	3.8	54
6	The importance of aquaporin-8 for cytokine-mediated toxicity in rat insulin-producing cells. Free Radical Biology and Medicine, 2021, 174, 135-143.	2.9	8
7	Hydrogen peroxide permeability of cellular membranes in insulin-producing cells. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183096.	2.6	16
8	Asymmetric dimethylation and citrullination in the LEW.1AR1-iddm rat, an animal model of human type 1 diabetes, and effects of anti-TCR/anti-TNF-Î± antibody-based therapy. Amino Acids, 2020, 52, 103-110.	2.7	2
9	Translation of curative therapy concepts with T cell and cytokine antibody combinations for type 1 diabetes reversal in the IDDM rat. Journal of Molecular Medicine, 2020, 98, 1125-1137.	3.9	1
10	Remission of autoimmune diabetes by anti-TCR combination therapies with anti-IL-17A or/and anti-IL-6 in the IDDM rat model of type 1 diabetes. BMC Medicine, 2020, 18, 33.	5.5	13
11	Toxicity of fatty acid profiles of popular edible oils in human EndoC-Î²H1 beta-cells. Nutrition and Diabetes, 2020, 10, 5.	3.2	10
12	Pancreas Pathology of Latent Autoimmune Diabetes in Adults (LADA) in Patients and in a LADA Rat Model Compared With Type 1 Diabetes. Diabetes, 2020, 69, 624-633.	0.6	31
13	Rat Models of Human Type 1 Diabetes. Methods in Molecular Biology, 2020, 2128, 69-85.	0.9	7
14	MCPIP1 regulates the sensitivity of pancreatic beta-cells to cytokine toxicity. Cell Death and Disease, 2019, 10, 29.	6.3	12
15	An editorial on the article â€˜Patents in the Diabetes Area in the Years 2008-2016â€™. Expert Opinion on Therapeutic Patents, 2018, 28, 173-174.	5.0	0
16	Results, meta-analysis and a first evaluation of UNOxR, the urinary nitrate-to-nitrite molar ratio, as a measure of nitrite reabsorption in experimental and clinical settings. Amino Acids, 2018, 50, 799-821.	2.7	23
17	Immune cell and cytokine patterns in children with type 1 diabetes mellitus undergoing a remission phase: A longitudinal study. Pediatric Diabetes, 2018, 19, 963-971.	2.9	18
18	Systems biology of the IMIDIA biobank from organ donors and pancreatectomised patients defines a novel transcriptomic signature of islets from individuals with type 2 diabetes. Diabetologia, 2018, 61, 641-657.	6.3	131

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19	Light-induced intracellular hydrogen peroxide generation through genetically encoded photosensitizer KillerRed-SOD1. Free Radical Research, 2018, 52, 1170-1181.	3.3	7
20	Î²-Cell DNA Damage Response Promotes Islet Inflammation in Type 1 Diabetes. Diabetes, 2018, 67, 2305-2318.	0.6	35
21	Chemistry and biology of reactive species with special reference to the antioxidative defence status in pancreatic Î²-cells. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 1929-1942.	2.4	97
22	Overexpression of sphingosine-1-phosphate lyase protects insulin-secreting cells against cytokine toxicity. Journal of Biological Chemistry, 2017, 292, 20292-20304.	3.4	24
23	Animal models of human type 1 diabetes for evaluating combination therapies and successful translation to the patient with type 1 diabetes. Diabetes/Metabolism Research and Reviews, 2017, 33, e2915.	4.0	26
24	ER-resident antioxidative GPx7 and GPx8 enzyme isoforms protect insulin-secreting INS-1E Î²-cells against lipotoxicity by improving the ER antioxidative capacity. Free Radical Biology and Medicine, 2017, 112, 121-130.	2.9	45
25	miRNome Profiling of Purified Endoderm and Mesoderm Differentiated from hESCs Reveals Functions of miR-483-3p and miR-1263 for Cell-Fate Decisions. Stem Cell Reports, 2017, 9, 1588-1603.	4.8	26
26	TriPer, an optical probe tuned to the endoplasmic reticulum tracks changes in luminal H2O2. BMC Biology, 2017, 15, 24.	3.8	35
27	Dynamics of Insulin Secretion from EndoC-Î²H1 Î²-Cell Pseudoislets in Response to Glucose and Other Nutrient and Nonnutrient Secretagogues. Journal of Diabetes Research, 2017, 2017, 1-6.	2.3	15
28	Improved antioxidative defence protects insulin-producing cells against homocysteine toxicity. Chemico-Biological Interactions, 2016, 256, 37-46.	4.0	5
29	Susceptibility of brown adipocytes to pro-inflammatory cytokine toxicity and reactive oxygen species. Bioscience Reports, 2016, 36, .	2.4	33
30	Sensitivity profile of the human EndoC-Î²H1 beta cell line to proinflammatory cytokines. Diabetologia, 2016, 59, 2125-2133.	6.3	54
31	The role of lipid droplet formation in the protection of unsaturated fatty acids against palmitic acid induced lipotoxicity to rat insulin-producing cells. Nutrition and Metabolism, 2016, 13, 16.	3.0	56
32	A novel Dock8 gene mutation confers diabetogenic susceptibility in the LEW.1AR1/Ztm-iddm rat, an animal model of human type 1 diabetes. Diabetologia, 2015, 58, 2800-2809.	6.3	13
33	Antagonism Between Saturated and Unsaturated Fatty Acids in ROS Mediated Lipotoxicity in Rat Insulin-Producing Cells. Cellular Physiology and Biochemistry, 2015, 36, 852-865.	1.6	63
34	Antidiabetic Effect of Interleukin-1Î² Antibody Therapy Through Î²-Cell Protection in the Cohen Diabetes-Sensitive Rat. Diabetes, 2015, 64, 1780-1785.	0.6	13
35	Physiological characterization of the human EndoC-Î²H1 Î²-cell line. Biochemical and Biophysical Research Communications, 2015, 464, 13-19.	2.1	38
36	Is Nitric Oxide Really the Primary Mediator of Pancreatic Î²-Cell Death in Type 1 Diabetes?. Journal of Biological Chemistry, 2015, 290, 10570.	3.4	2

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37	TNF-Î± Antibody Therapy in Combination With the T-Cellâ€"Specific Antibody Anti-TCR Reverses the Diabetic Metabolic State in the LEW.1AR1-<i>iddm</i>Rat. Diabetes, 2015, 64, 2880-2891.	0.6	22
38	ERO1-independent production of H2O2 within the endoplasmic reticulum fuels Prdx4-mediated oxidative protein folding. Journal of Cell Biology, 2015, 211, 253-259.	5.2	53
39	Islet infiltration, cytokine expression and beta cell death in the NOD mouse, BB rat, Komeda rat, LEW.1AR1-iddm rat and humans with type 1 diabetes. Diabetologia, 2014, 57, 512-521.	6.3	76
40	A Fresh View of Glycolysis and Glucokinase Regulation: History and Current Status. Journal of Biological Chemistry, 2014, 289, 12189-12194.	3.4	117
41	Peroxiredoxin 4 Improves Insulin Biosynthesis and Glucose-induced Insulin Secretion in Insulin-secreting INS-1E Cells. Journal of Biological Chemistry, 2014, 289, 26904-26913.	3.4	49
42	Anti-TCR therapy combined with fingolimod for reversal of diabetic hyperglycemia by Î² cell regeneration in the LEW.1AR1-iddm rat model of type 1 diabetes. Journal of Molecular Medicine, 2014, 92, 743-55.	3.9	13
43	A Variable CD3+ T-Cell Frequency in Peripheral Blood Lymphocytes Associated with Type 1 Diabetes Mellitus Development in the LEW.1AR1-iddm Rat. PLoS ONE, 2013, 8, e64305.	2.5	15
44	The H2O2-sensitive HyPer protein targeted to the endoplasmic reticulum as a mirror of the oxidizing thiolâ€"disulfide milieu. Free Radical Biology and Medicine, 2012, 53, 1451-1458.	2.9	44
45	Mechanism of Prostacyclin-Induced Potentiation of Glucose-Induced Insulin Secretion. Endocrinology, 2012, 153, 2612-2622.	2.8	18
46	Effects of the novel mitochondrial protein mimitin in insulin-secreting cells. Biochemical Journal, 2012, 445, 349-359.	3.7	11
47	Real-time analysis of intracellular glucose and calcium in pancreatic beta cells by fluorescence microscopy. Biochimica Et Biophysica Acta - Molecular Cell Research, 2012, 1823, 1697-1707.	4.1	24
48	Is there a role for neuronal nitric oxide synthase (nNOS) in cytokine toxicity to pancreatic beta cells?. Nitric Oxide - Biology and Chemistry, 2012, 27, 235-241.	2.7	11
49	Additive activation of glucokinase by the bifunctional enzyme 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase and the chemical activator LY2121260. Biochemical Pharmacology, 2012, 83, 1300-1306.	4.4	19
50	Differential effects of proinflammatory cytokines on cell death and ER stress in insulin-secreting INS1E cells and the involvement of nitric oxide. Cytokine, 2011, 55, 195-201.	3.2	40
51	Modulation of Bcl-2-related protein expression in pancreatic beta cells by pro-inflammatory cytokines and its dependence on the antioxidative defense status. Molecular and Cellular Endocrinology, 2011, 332, 88-96.	3.2	54
52	Induction of the intrinsic apoptosis pathway in insulin-secreting cells is dependent on oxidative damage of mitochondria but independent of caspase-12 activation. Biochimica Et Biophysica Acta - Molecular Cell Research, 2011, 1813, 1827-1835.	4.1	28
53	Cytokine toxicity in insulin-producing cells is mediated by nitro-oxidative stress-induced hydroxyl radical formation in mitochondria. Journal of Molecular Medicine, 2011, 89, 785-798.	3.9	58
54	Peroxisome-Generated Hydrogen Peroxide as Important Mediator of Lipotoxicity in Insulin-Producing Cells. Diabetes, 2011, 60, 200-208.	0.6	186

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55	Diabetes Prevention by Immunomodulatory FTY720 Treatment in the LEW.1AR1-iddm Rat Despite Immune Cell Activation. Endocrinology, 2010, 151, 3555-3565.	2.8	45
56	Protection of insulin-producing cells against toxicity of dexamethasone by catalase overexpression. Free Radical Biology and Medicine, 2009, 47, 1386-1393.	2.9	20
57	The mutation of the LEW.1AR1-iddm rat maps to the telomeric end of rat chromosome 1. Mammalian Genome, 2008, 19, 292-297.	2.2	13
58	Oxidative stress: the vulnerable Î²-cell. Biochemical Society Transactions, 2008, 36, 343-347.	3.4	460
59	Impaired Glucose-Stimulated Insulin Secretion Is Coupled With Exocrine Pancreatic Lesions in the Cohen Diabetic Rat. Diabetes, 2008, 57, 279-287.	0.6	49
60	Regulation of [Ca2+]i oscillations in mouse pancreatic islets by adrenergic agonists. Biochemical and Biophysical Research Communications, 2007, 363, 1038-1043.	2.1	7
61	Triiodothyronine (T3)-mediated toxicity and induction of apoptosis in insulin-producing INS-1 cells. Life Sciences, 2007, 80, 2045-2050.	4.3	32
62	MIN6 Î²-cellâ€“Î²-cell interactions influence insulin secretory responses to nutrients and non-nutrients. Biochemical and Biophysical Research Communications, 2006, 343, 99-104.	2.1	85
63	Mechanisms of Pancreatic Â-Cell Death in Type 1 and Type 2 Diabetes: Many Differences, Few Similarities. Diabetes, 2005, 54, S97-S107.	0.6	1,296
64	Genetic analysis of the LEW.1AR1-iddm rat: an animal model for spontaneous diabetes mellitus. Mammalian Genome, 2005, 16, 432-441.	2.2	22
65	Effects of polyinosinic-polycytidylic acid and adoptive transfer of immune cells in the LEW.1AR1-iddmrat and in its coisogenic LEW.1AR1 background strain. Autoimmunity, 2005, 38, 265-275.	2.6	10
66	Immune Cell Infiltration, Cytokine Expression, and Â-Cell Apoptosis During the Development of Type 1 Diabetes in the Spontaneously Diabetic LEW.1AR1/Ztm-iddm Rat. Diabetes, 2005, 54, 2041-2052.	0.6	111
67	Mitochondrial Catalase Overexpression Protects Insulin-Producing Cells Against Toxicity of Reactive Oxygen Species and Proinflammatory Cytokines. Diabetes, 2004, 53, 2271-2280.	0.6	133
68	Pathology of the pancreas and other organs in the diabetic LEW.1AR1/Ztm- iddm rat, a new model of spontaneous insulin-dependent diabetes mellitus. Virchows Archiv Fur Pathologische Anatomie Und Physiologie Und Fur Klinische Medizin, 2004, 444, 183-189.	2.8	30
69	Improvement of the Mitochondrial Antioxidant Defense Status Prevents Cytokine-Induced Nuclear Factor-Î°B Activation in Insulin-Producing Cells. Diabetes, 2003, 52, 93-101.	0.6	153
70	N-Arylsulfonyl-benzimidazolones as Potential Hypoglycemic Agents. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2002, 57, 349-354.	0.7	11
71	Importance of lactate dehydrogenase for the regulation of glycolytic flux and insulin secretion in insulin-producing cells. Biochemical Journal, 2000, 352, 373.	3.7	10
72	Importance of Cysteine Residues for the Stability and Catalytic Activity of Human Pancreatic Beta Cell Glucokinase. Archives of Biochemistry and Biophysics, 2000, 375, 251-260.	3.0	68

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73	Differential regulation of [Ca2+]i oscillations in mouse pancreatic islets by glucose, Î±-ketoisocaproic acid, glyceraldehyde and glycolytic intermediates. Biochimica Et Biophysica Acta - General Subjects, 2000, 1523, 65-72.	2.4	33
74	Engineering of a Glucose-Responsive Surrogate Cell for Insulin Replacement Therapy of Experimental Insulin-Dependent Diabetes. Human Gene Therapy, 2000, 11, 403-414.	2.7	26
75	Importance of lactate dehydrogenase for the regulation of glycolytic flux and insulin secretion in insulin-producing cells. Biochemical Journal, 2000, 352, 373-380.	3.7	33
76	Nutrient-dependent distribution of insulin and glucokinase immunoreactivities in rat pancreatic beta cells. Virchows Archiv Fur Pathologische Anatomie Und Physiologie Und Fur Klinische Medizin, 1999, 434, 75-82.	2.8	23
77	Signal recognition by pancreatic B-cells. Biochemical Pharmacology, 1988, 37, 371-378.	4.4	74
78	Effects of isoprenaline and glucagon on insulin secretion from pancreatic islets. Naunyn-Schmiedeberg's Archives of Pharmacology, 1985, 329, 299-304.	3.0	10
79	Thyroid Hormones, Gonadal and Adrenocortical Steroids and the Function of the Islets of Langerhans. Endocrine Reviews, 1984, 5, 411-434.	20.1	146
80	Characterization of succinate dehydrogenase and Î±-glycerophosphate dehydrogenase in pancreatic islets. Biochemical Medicine, 1983, 30, 349-356.	0.5	19
81	Effects of pyruvate, l-lactate, and 3-phenylpyruvate on function of mouse pancreatic islets: Insulin secretion in relation to 45Ca2+ uptake and metabolism. Biochemical Medicine, 1981, 25, 366-372.	0.5	16
82	Insulin Secretion and the Morphological and Metabolic Characteristics of Pancreatic Islets of Hyperthyroid ob/ob Mice*. Endocrinology, 1978, 103, 1546-1555.	2.8	29
83	Blick in die Forschung: Realistische Perspektive auf Heilung. , 0, , .		0