Coert J Zuurbier

List of Publications by Year
in descending order

94 papers	4,628 citations	81900 39 h-index	106344 65 g-index
94 all docs	94 docs citations	94 times ranked	5276 citing authors

#	Article	IF	Citations
1	Empagliflozin decreases myocardial cytoplasmic Na+ through inhibition of the cardiac Na+/H+ exchanger in rats and rabbits. Diabetologia, 2017, 60, 568-573.	6.3	468
2	Class effects of SGLT2 inhibitors in mouse cardiomyocytes and hearts: inhibition of Na+/H+ exchanger, lowering of cytosolic Na+ and vasodilation. Diabetologia, 2018, 61, 722-726.	6.3	412
3	Short-term hyperglycemia increases endothelial glycocalyx permeability and acutely decreases lineal density of capillaries with flowing red blood cells. Journal of Applied Physiology, 2005, 99, 1471-1476.	2.5	147
4	Hemodynamics of anesthetized ventilated mouse models: aspects of anesthetics, fluid support, and strain. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 282, H2099-H2105.	3.2	130
5	Direct Cardiac Actions of Sodium Glucose Cotransporter 2 Inhibitors Target Pathogenic Mechanisms Underlying Heart Failure in Diabetic Patients. Frontiers in Physiology, 2018, 9, 1575.	2.8	130
6	Length-force characteristics of the aponeurosis in the passive and active muscle condition and in the isolated condition. Journal of Biomechanics, 1994, 27, 445-453.	2.1	120
7	Empagliflozin and Dapagliflozin Reduce ROS Generation and Restore NO Bioavailability in Tumor Necrosis Factor Î±-Stimulated Human Coronary Arterial Endothelial Cells. Cellular Physiology and Biochemistry, 2019, 53, 865-886.	1.6	120
8	Anesthesia's Effects on Plasma Glucose and Insulin and Cardiac Hexokinase at Similar Hemodynamics and Without Major Surgical Stress in Fed Rats. Anesthesia and Analgesia, 2008, 106, 135-142.	2.2	115
9	In Vivo Mitochondrial Oxygen Tension Measured by a Delayed Fluorescence Lifetime Technique. Biophysical Journal, 2008, 95, 3977-3990.	0.5	113
10	Innate immunity as a target for acute cardioprotection. Cardiovascular Research, 2019, 115, 1131-1142.	3.8	101
11	Cardiac metabolism as a driver and therapeutic target of myocardial infarction. Journal of Cellular and Molecular Medicine, 2020, 24, 5937-5954.	3.6	101
12	Influence of muscle geometry on shortening speed of fibre, aponeurosis and muscle. Journal of Biomechanics, 1992, 25, 1017-1026.	2.1	98
13	Functional heterogeneity of oxygen supply-consumption ratio in the heart. Cardiovascular Research, 1999, 44, 488-497.	3.8	93
14	The Mechanisms and Physiological Relevance of Glycocalyx Degradation in Hepatic Ischemia/Reperfusion Injury. Antioxidants and Redox Signaling, 2014, 21, 1098-1118.	5.4	91
15	Targeting hexokinase <scp>II</scp> to mitochondria to modulate energy metabolism and reduce ischaemiaâ€reperfusion injury in heart. British Journal of Pharmacology, 2014, 171, 2067-2079.	5.4	91
16	NLRX1 dampens oxidative stress and apoptosis in tissue injury via control of mitochondrial activity. Journal of Experimental Medicine, 2017, 214, 2405-2420.	8.5	90
17	Ischemic preconditioning, insulin, and morphine all cause hexokinase redistribution. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H496-H499.	3.2	81
18	Reduction in Hexokinase II Levels Results in Decreased Cardiac Function and Altered Remodeling After Ischemia/Reperfusion Injury. Circulation Research, 2011, 108, 60-69.	4.5	79

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19	Deletion of the Innate Immune NLRP3 Receptor Abolishes Cardiac Ischemic Preconditioning and Is Associated with Decreased Il-6/STAT3 Signaling. PLoS ONE, 2012, 7, e40643.	2.5	78
20	Helium-induced Preconditioning in Young and Old Rat Heart. Anesthesiology, 2008, 109, 830-836.	2.5	78
21	Energy substrate metabolism and mitochondrial oxidative stress in cardiac ischemia/reperfusion injury. Free Radical Biology and Medicine, 2021, 165, 24-37.	2.9	76
22	Disruption of Hexokinase IIâ€“Mitochondrial Binding Blocks Ischemic Preconditioning and Causes Rapid Cardiac Necrosis. Circulation Research, 2011, 108, 1165-1169.	4.5	73
23	IMproving Preclinical Assessment of Cardioprotective Therapies (IMPACT) criteria: guidelines of the EU-CARDIOPROTECTION COST Action. Basic Research in Cardiology, 2021, 116, 52.	5.9	73
24	Delayed ischaemic contracture onset by empagliflozin associates with NHE1 inhibition and is dependent on insulin in isolated mouse hearts. Cardiovascular Research, 2019, 115, 1533-1545.	3.8	71
25	Effects of two weeks of metformin treatment on whole-body glycocalyx barrier properties in db/db mice. Cardiovascular Diabetology, 2013, 12, 175.	6.8	70
26	Effect of hyperglycaemia and diabetes on acute myocardial ischaemiaâ€“reperfusion injury and cardioprotection by ischaemic conditioning protocols. British Journal of Pharmacology, 2020, 177, 5312-5335.	5.4	68
27	Blood pressure influences end-stage renal disease of Cd151 knockout mice. Journal of Clinical Investigation, 2012, 122, 348-358.	8.2	65
28	Mitochondrial oxygen tension within the heart. Journal of Molecular and Cellular Cardiology, 2009, 46, 943-951.	1.9	63
29	SGLT2 inhibitors reduce infarct size in reperfused ischemic heart and improve cardiac function during ischemic episodes in preclinical models. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2020, 1866, 165770.	3.8	62
30	Direct cardiac effects of SGLT2 inhibitors. Cardiovascular Diabetology, 2022, 21, 45.	6.8	62
31	Suspended animation inducer hydrogen sulfide is protective in an inÂvivo model of ventilator-induced lung injury. Intensive Care Medicine, 2010, 36, 1946-1952.	8.2	56
32	Reduced acute myocardial ischemiaâ€“reperfusion injury in IL-6-deficient mice employing a closed-chest model. Inflammation Research, 2016, 65, 489-499.	4.0	52
33	Cardiac mechanisms of the beneficial effects of SGLT2 inhibitors in heart failure: Evidence for potential off-target effects. Journal of Molecular and Cellular Cardiology, 2022, 167, 17-31.	1.9	52
34	Nlrp3 plays no role in acute cardiac infarction due to low cardiac expression. International Journal of Cardiology, 2014, 177, 41-43.	1.7	51
35	Ischemic preconditioning affects hexokinase activity and HKII in different subcellular compartments throughout cardiac ischemia-reperfusion. Journal of Applied Physiology, 2009, 106, 1909-1916.	2.5	50
36	Optimizing anesthetic regimen for surgery in mice through minimization of hemodynamic, metabolic, and inflammatory perturbations. Experimental Biology and Medicine, 2014, 239, 737-746.	2.4	47

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37	Empagliflozin reduces oxidative stress through inhibition of the novel inflammation/NHE/[Na+]c/ROS-pathway in human endothelial cells. Biomedicine and Pharmacotherapy, 2022, 146, 112515.	5.6	47
38	Inhibition of the pentose phosphate pathway decreases ischemiaâ€“reperfusion-induced creatine kinase release in the heart. Cardiovascular Research, 2004, 62, 145-153.	3.8	45
39	Effect of metformin pretreatment on myocardial injury during coronary artery bypass surgery in patients without diabetes (MetCAB): a double-blind, randomised controlled trial. Lancet Diabetes and Endocrinology,the, 2015, 3, 615-623.	11.4	45
40	Novel Anti-inflammatory Effects of Canagliflozin Involving Hexokinase II in Lipopolysaccharide-Stimulated Human Coronary Artery Endothelial Cells. Cardiovascular Drugs and Therapy, 2021, 35, 1083-1094.	2.6	44
41	Chronic Empagliflozin Treatment Reduces Myocardial Infarct Size in Nondiabetic Mice Through STAT-3-Mediated Protection on Microvascular Endothelial Cells and Reduction of Oxidative Stress. Antioxidants and Redox Signaling, 2021, 34, 551-571.	5.4	44
42	Mitochondrial hexokinase and cardioprotection of the intact heart. Journal of Bioenergetics and Biomembranes, 2009, 41, 181-185.	2.3	37
43	Increased cardiac fatty acid oxidation in a mouse model with decreased malonyl-CoA sensitivity of CPT1B. Cardiovascular Research, 2018, 114, 1324-1334.	3.8	37
44	Sodium-glucose co-transporter 2 inhibitor empagliflozin inhibits the cardiac Na+/H+ exchanger 1: persistent inhibition under various experimental conditions. Cardiovascular Research, 2021, 117, 2699-2701.	3.8	37
45	Sodium Glucose Co-Transporter 2 Inhibitors Ameliorate Endothelium Barrier Dysfunction Induced by Cyclic Stretch through Inhibition of Reactive Oxygen Species. International Journal of Molecular Sciences, 2021, 22, 6044.	4.1	37
46	Deletion of NLRX1 increases fatty acid metabolism and prevents diet-induced hepatic steatosis and metabolic syndrome. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2018, 1864, 1883-1895.	3.8	30
47	Increased in vivo mitochondrial oxygenation with right ventricular failure induced by pulmonary arterial hypertension: mitochondrial inhibition as driver of cardiac failure?. Respiratory Research, 2015, 16, 6.	3.6	29
48	Influence of cardiometabolic comorbidities on myocardial function, infarction, and cardioprotection: Role of cardiac redox signaling. Free Radical Biology and Medicine, 2021, 166, 33-52.	2.9	28
49	Perioperative hyperinsulinaemic normoglycaemic clamp causes hypolipidaemia after coronary artery surgery. British Journal of Anaesthesia, 2008, 100, 442-450.	3.4	26
50	NLRP3 Inflammasome in Cardioprotective Signaling. Journal of Cardiovascular Pharmacology, 2019, 74, 271-275.	1.9	25
51	Hexokinase cellular trafficking in ischemiaâ€“reperfusion and ischemic preconditioning is altered in type I diabetic heart. Molecular Biology Reports, 2013, 40, 4153-4160.	2.3	23
52	Empagliflozin Decreases Lactate Generation in an NHE-1 Dependent Fashion and Increases Î±-Ketoglutarate Synthesis From Palmitate in Type II Diabetic Mouse Hearts. Frontiers in Cardiovascular Medicine, 2020, 7, 592233.	2.4	22
53	Cardioprotection by selective SGLT-2 inhibitors in a non-diabetic mouse model of myocardial ischemia/reperfusion injury: a class or a drug effect?. Basic Research in Cardiology, 2022, 117, 27.	5.9	21
54	Reducing mitochondrial bound hexokinase II mediates transition from non-injurious into injurious ischemia/reperfusion of the intact heart. Journal of Physiology and Biochemistry, 2016, 73, 323-333.	3.0	20

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55	Post-ischaemic changes in the response time of oxygen consumption to demand in the isolated rat heart are mediated partly by calcium and glycolysis. Pflugers Archiv European Journal of Physiology, 2002, 443, 908-916.	2.8	19
56	In vivomouse myocardial31P MRS using three-dimensional image-selectedin vivospectroscopy (3D ISIS): technical considerations and biochemical validations. NMR in Biomedicine, 2015, 28, 1218-1227.	2.8	19
57	Cardioprotective efficacy depends critically on pharmacological dose, duration of ischaemia, health status of animals and choice of anaesthetic regimen: a case study with folic acid. Journal of Translational Medicine, 2014, 12, 325.	4.4	16
58	NLRX1 Deletion Increases Ischemia-Reperfusion Damage and Activates Glucose Metabolism in Mouse Heart. Frontiers in Immunology, 2020, 11, 591815.	4.8	16
59	Amelioration of endothelial dysfunction by sodium glucose coâ€transporter 2 inhibitors: pieces of the puzzle explaining their cardiovascular protection. British Journal of Pharmacology, 2022, 179, 4047-4062.	5.4	16
60	Acute detachment of hexokinase II from mitochondria modestly increases oxygen consumption of the intact mouse heart. Metabolism: Clinical and Experimental, 2017, 72, 66-74.	3.4	15
61	A randomized trial of remote ischemic preconditioning and control treatment for cardioprotection in sevoflurane-anesthetized CABG patients. BMC Anesthesiology, 2017, 17, 51.	1.8	15
62	Fentanyl-fluanisone-midazolam combination results in more stable hemodynamics than does urethane alpha-chloralose and 2,2,2-tribromoethanol in mice. Contemporary Topics in Laboratory Animal Science, 2002, 41, 28-32.	0.2	14
63	The effect of standard chow and reduced hexokinase II on growth, cardiac and skeletal muscle hexokinase and low-flow cardiac ischaemiaâ€“reperfusion injury. Laboratory Animals, 2011, 45, 160-166.	1.0	13
64	A role for NLRP3 inflammasome in acute myocardial ischaemia-reperfusion injury?. Cardiovascular Research, 2013, 99, 226-226.	3.8	11
65	Pathophysiological Consequences of TAT-HKII Peptide Administration Are Independent of Impaired Vascular Function and Ensuing Ischemia. Circulation Research, 2013, 112, e8-13.	4.5	11
66	Volume incompliance and transfusion are essential for transfusionâ€associated circulatory overload: a novel animal model. Transfusion, 2019, 59, 3617-3627.	1.6	11
67	Cyclophilin D ablation is associated with increased end-ischemic mitochondrial hexokinase activity. Scientific Reports, 2017, 7, 12749.	3.3	9
68	Washing or filtering of blood products does not improve outcome in a rat model of trauma and multiple transfusion. Transfusion, 2019, 59, 134-145.	1.6	9
69	Quantification of Myocardial Creatine and Triglyceride Content in the Human Heart: Precision and Accuracy of in vivo Proton Magnetic Resonance Spectroscopy. Journal of Magnetic Resonance Imaging, 2021, 54, 411-420.	3.4	9
70	Ratiometric intracellular calcium imaging in the isolated beating rat heart using indo-1 fluorescence. Journal of Applied Physiology, 2004, 97, 2042-2050.	2.5	8
71	Ascorbic acid improves renal microcirculatory oxygenation in a rat model of renal I/R injury. Journal of Translational Internal Medicine, 2015, 3, 116-125.	2.5	8
72	Partial hexokinase II knockout results in acute ischemiaâ€“reperfusion damage in skeletal muscle of male, but not female, mice. Pflugers Archiv European Journal of Physiology, 2010, 459, 705-712.	2.8	7

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73	Reduced hexokinase II impairs muscle function 2 wk after ischemia-reperfusion through increased cell necrosis and fibrosis. Journal of Applied Physiology, 2012, 113, 608-618.	2.5	7
74	Cardioprotecive Properties of Known Agents in Rat Ischemia-Reperfusion Model Under Clinically Relevant Conditions: Only the NAD Precursor Nicotinamide Riboside Reduces Infarct Size in Presence of Fentanyl, Midazolam and Cangrelor, but Not Propofol. Frontiers in Cardiovascular Medicine, 2021, 8, 712478.	2.4	7
75	Undiminished mitochondrial function during stunning in rabbit heart at 28Â°C. Cardiovascular Research, 1997, 35, 113-119.	3.8	6
76	Glucose-Insulin Therapy, Plasma Substrate Levels and Cardiac Recovery After Cardiac Ischemic Events. Cardiovascular Drugs and Therapy, 2008, 22, 125-131.	2.6	6
77	Response to letter from Toldo etÂal. on â€œNLRP3 inflammasome activation during myocardial ischemia reperfusion is cardioprotectiveâ€• Biochemical and Biophysical Research Communications, 2016, 474, 328-329.	2.1	6
78	Divergent Effects of Hypertonic Fluid Resuscitation on Renal Pathophysiological and Structural Parameters in Rat Model of Lower Body Ischemia/Reperfusion-Induced Sterile Inflammation. Shock, 2018, 50, 655-663.	2.1	6
79	Overestimation of Plasma Nonesterified Fatty Acid Concentrations in Heparinized Blood. Circulation, 2004, 110, e328; author reply e328.	1.6	5
80	Physiological levels of glutamine prevent morphine-induced preconditioning in the isolated rat heart. European Journal of Pharmacology, 2008, 595, 58-64.	3.5	5
81	Targeting metabolic pathways to treat cardiovascular diseases. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2020, 1866, 165879.	3.8	5
82	Letter to the editor: Ketamine-only versus isoflurane effects on murine cardiac function: comparison at similar depths of anesthesia?. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H2160-H2160.	3.2	4
83	Editorial: Diabetes and Heart Failure: Pathogenesis and Novel Therapeutic Approaches. Frontiers in Physiology, 2019, 10, 253.	2.8	4
84	The Redox Modulating Sonlicromanol Active Metabolite KH176m and the Antioxidant MPG Protect Against Short-Duration Cardiac Ischemia-Reperfusion Injury. Cardiovascular Drugs and Therapy, 2021, 35, 745-758.	2.6	4
85	Commonly Used Numbers of Microspheres Affect Cardiac Vascular Resistance. Journal of Cardiovascular Pharmacology, 2003, 41, 223-232.	1.9	3
86	Remote ischaemic preconditioning of the lung: from bench to bedsideâ€”are we there yet?. Journal of Thoracic Disease, 2018, 10, 98-101.	1.4	3
87	Ketamine-(Dex)Medetomidine, Hyperglycemia, Glycocalyx, and Vascular Permeability. Anesthesia and Analgesia, 2019, 129, e102.	2.2	3
88	Does acute treatment of dapagliflozin reduce cardiac infarct size through direct cardiac effects or reductions in blood glucose levels?. Cardiovascular Diabetology, 2020, 19, 141.	6.8	2
89	Insulin as ischaemic preconditioning-mimetic. Acta Physiologica, 2009, 195, 203-203.	3.8	1
90	Novel Mechanism of Mitochondrial Respiration Control through Competition between Hexokinase-2 and Tubulin for VDAC Binding. Biophysical Journal, 2013, 104, 655a.	0.5	1

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91	Mouse Anesthesia in Relation to Optimal Hemodynamics. Basic Science for the Cardiologist, 2004, , 23-34.	0.1	0
92	CARDIAC ISCHEMIAâ€REPERFUSION DAMAGE IN PARTIAL HEXOKINASE (HK) II KNOCKOUT MICE. FASEB Journal, 2007, 21, A1224.	0.5	0
93	Effects of metformin on endothelial glycocalyx properties in db/db mice. FASEB Journal, 2008, 22, 1226.27.	0.5	0
94	Empagliflozin effects on ischemic contracture and I/R injury in isolated mouse hearts perfused with or without insulin. FASEB Journal, 2018, 32, lb292.	0.5	0