

# Erich Gnaiger

## List of Publications by Year in descending order

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Version: 2024-02-01

87  
papers

6,232  
citations

76326

40  
h-index

71685

76  
g-index

104  
all docs

104  
docs citations

104  
times ranked

8474  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparable respiratory activity in attached and suspended human fibroblasts. <i>PLoS ONE</i> , 2022, 17, e0264496.	2.5	10
2	Mitochondrial Respiration in Response to Iron Deficiency Anemia: Comparison of Peripheral Blood Mononuclear Cells and Liver. <i>Metabolites</i> , 2022, 12, 270.	2.9	4
3	Proline Oxidation Supports Mitochondrial ATP Production When Complex I Is Inhibited. <i>International Journal of Molecular Sciences</i> , 2022, 23, 5111.	4.1	12
4	Effects of Ultramarathon Running on Mitochondrial Function of Platelets and Oxidative Stress Parameters: A Pilot Study. <i>Frontiers in Physiology</i> , 2021, 12, 632664.	2.8	12
5	Fatty acyl availability modulates cardiolipin composition and alters mitochondrial function in HeLa cells. <i>Journal of Lipid Research</i> , 2021, 62, 100111.	4.2	14
6	Succinate Anaplerosis Has an Onco-Driving Potential in Prostate Cancer Cells. <i>Cancers</i> , 2021, 13, 1727.	3.7	13
7	Human Platelet Mitochondrial Function Reflects Systemic Mitochondrial Alterations: A Protocol for Application in Field Studies. <i>Cells</i> , 2021, 10, 2088.	4.1	4
8	Myoglobin, expressed in brown adipose tissue of mice, regulates the content and activity of mitochondria and lipid droplets. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2021, 1866, 159026.	2.4	14
9	Dietary Iron Overload and Hfe-Related Hemochromatosis Alter Hepatic Mitochondrial Function. <i>Antioxidants</i> , 2021, 10, 1818.	5.1	8
10	Mitochondrial Respiration of Platelets: Comparison of Isolation Methods. <i>Biomedicines</i> , 2021, 9, 1859.	3.2	1
11	OXPHOS remodeling in high-grade prostate cancer involves mtDNA mutations and increased succinate oxidation. <i>Nature Communications</i> , 2020, 11, 1487.	12.8	78
12	Physiological and Pathophysiological Responses to Ultramarathon Running in Non-elite Runners. <i>Frontiers in Physiology</i> , 2019, 10, 1300.	2.8	24
13	Association of mitochondrial iron deficiency and dysfunction with idiopathic restless legs syndrome. <i>Movement Disorders</i> , 2019, 34, 114-123.	3.9	21
14	Molecular structural diversity of mitochondrial cardiolipins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 4158-4163.	7.1	82
15	Adaptive remodeling of skeletal muscle energy metabolism in high-altitude hypoxia: Lessons from AltitudeOmics. <i>Journal of Biological Chemistry</i> , 2018, 293, 6659-6671.	3.4	57
16	The protonmotive force under pressure: an isomorphic analysis. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, e12-e13.	1.0	0
17	Tissue- and substrate-specific patterns in the oxygen kinetics of mitochondrial respiration. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, e17.	1.0	0
18	Electron supply to the Q-junction: assessment of mitochondrial respiration, H <sub>2</sub> O <sub>2</sub> flux and the redox state of the Q-pool. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, e61.	1.0	0

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19	Proenkephalin Derived Peptides Are Involved in the Modulation of Mitochondrial Respiratory Control During Epileptogenesis. <i>Frontiers in Molecular Neuroscience</i> , 2018, 11, 351.	2.9	6
20	Evaluation of mitochondrial function in chronic myofascial trigger points - a prospective cohort pilot study using high-resolution respirometry. <i>BMC Musculoskeletal Disorders</i> , 2018, 19, 388.	1.9	9
21	Comparison of Mitochondrial Incubation Media for Measurement of Respiration and Hydrogen Peroxide Production. <i>Methods in Molecular Biology</i> , 2018, 1782, 137-155.	0.9	17
22	High-Resolution FluoRespirometry and OXPHOS Protocols for Human Cells, Permeabilized Fibers from Small Biopsies of Muscle, and Isolated Mitochondria. <i>Methods in Molecular Biology</i> , 2018, 1782, 31-70.	0.9	137
23	Succinate Accumulation Is Associated with a Shift of Mitochondrial Respiratory Control and HIF-1 $\alpha$ Upregulation in PTEN Negative Prostate Cancer Cells. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2129.	4.1	15
24	Exercise Performance, Muscle Oxygen Extraction and Blood Cell Mitochondrial Respiration after Repeated-Sprint and Sprint Interval Training in Hypoxia: A Pilot Study. <i>Journal of Sports Science and Medicine</i> , 2018, 17, 339-347.	1.6	13
25	Remodeling pathway control of mitochondrial respiratory capacity by temperature in mouse heart: electron flow through the Q-junction in permeabilized fibers. <i>Scientific Reports</i> , 2017, 7, 2840.	3.3	82
26	Metabolic basis to Sherpa altitude adaptation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 6382-6387.	7.1	162
27	Dietary iron loading negatively affects liver mitochondrial function. <i>Metallomics</i> , 2017, 9, 1634-1644.	2.4	47
28	Mitochondrial respiration in highly aerobic canines in the non-raced state and after a 1600-km sled dog race. <i>PLoS ONE</i> , 2017, 12, e0174874.	2.5	20
29	From basic mechanisms to clinical applications in heart protection, new players in cardiovascular diseases and cardiac theranostics: meeting report from the third international symposium on "New frontiers in cardiovascular research". <i>Basic Research in Cardiology</i> , 2016, 111, 69.	5.9	41
30	Oxidative phosphorylation and mitochondrial function differ between human prostate tissue and cultured cells. <i>FEBS Journal</i> , 2016, 283, 2181-2196.	4.7	38
31	Differences in mitochondrial function in homogenated samples from healthy and epileptic specific brain tissues revealed by high-resolution respirometry. <i>Mitochondrion</i> , 2015, 25, 104-112.	3.4	66
32	Mitochondrial coupling and capacity of oxidative phosphorylation in skeletal muscle of Inuit and Caucasians in the arctic winter. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2015, 25, 126-134.	2.9	33
33	High-Resolution Respirometry for Simultaneous Measurement of Oxygen and Hydrogen Peroxide Fluxes in Permeabilized Cells, Tissue Homogenate and Isolated Mitochondria. <i>Biomolecules</i> , 2015, 5, 1319-1338.	4.0	168
34	Amphotericin B Resistance in <i>Aspergillus terreus</i> Is Overpowered by Coapplication of Pro-oxidants. <i>Antioxidants and Redox Signaling</i> , 2015, 23, 1424-1438.	5.4	25
35	Cytochrome redox states and respiratory control in mouse and beef heart mitochondria at steady-state levels of hypoxia. <i>Journal of Applied Physiology</i> , 2015, 119, 1210-1218.	2.5	16
36	Simultaneous High-Resolution Measurement of Mitochondrial Respiration and Hydrogen Peroxide Production. <i>Methods in Molecular Biology</i> , 2015, 1264, 245-261.	0.9	86

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37	Differential Utilization of Dietary Fatty Acids in Benign and Malignant Cells of the Prostate. PLoS ONE, 2015, 10, e0135704.	2.5	19
38	High fatty acid oxidation capacity and phosphorylation control despite elevated leak and reduced respiratory capacity in northern elephant seal muscle mitochondria. Journal of Experimental Biology, 2014, 217, 2947-55.	1.7	26
39	The best approach: Homogenization or manual permeabilization of human skeletal muscle fibers for respirometry?. Analytical Biochemistry, 2014, 446, 64-68.	2.4	32
40	Thermal plasticity of skeletal muscle mitochondrial activity and whole animal respiration in a common intertidal triplefin fish, <i>Forsterygion lapillum</i> (Family: Tripterygiidae). Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2014, 184, 991-1001.	1.5	42
41	The relationship between cytochrome redox state and oxygen consumption in isolated mouse and beef heart mitochondria during hypoxia. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, e72.	1.0	0
42	Combined high-resolution respirometry and fluorometry. Validation of safranin for determination of mitochondrial membrane potential. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, e72.	1.0	0
43	Use of Safranin for the Assessment of Mitochondrial Membrane Potential by High-Resolution Respirometry and Fluorometry. Methods in Enzymology, 2014, 542, 163-181.	1.0	53
44	Mitochondrial function in human skeletal muscle following high-altitude exposure. Experimental Physiology, 2013, 98, 245-255.	2.0	48
45	Physical Activity and Cardiovascular Diseases Epidemiology and Primary Preventive and Therapeutic Targets. , 2013, , 127-144.		1
46	The role of haemoglobin mass on VO <sub>2</sub> max following normobaric "live high" train low™ in endurance-trained athletes. British Journal of Sports Medicine, 2012, 46, 822-827.	6.7	36
47	High-Resolution Respirometry: OXPHOS Protocols for Human Cells and Permeabilized Fibers from Small Biopsies of Human Muscle. Methods in Molecular Biology, 2012, 810, 25-58.	0.9	779
48	Mitochondrial Gene Therapy Improves Respiration, Biogenesis, and Transcription in G11778A Leber's Hereditary Optic Neuropathy and T8993G Leigh's Syndrome Cells. Human Gene Therapy, 2012, 23, 647-657.	2.7	49
49	Arnold Durig (1872-1961): Life and Work. An Austrian Pioneer in Exercise and High Altitude Physiology. High Altitude Medicine and Biology, 2012, 13, 224-231.	0.9	0
50	Physical Fitness and Mitochondrial Respiratory Capacity in Horse Skeletal Muscle. PLoS ONE, 2012, 7, e34890.	2.5	50
51	Mitochondrial gene therapy improves respiration and biogenesis in mitochondrial diseases of children and adults. Mitochondrion, 2012, 12, 559-560.	3.4	0
52	Similar qualitative and quantitative changes of mitochondrial respiration following strength and endurance training in normoxia and hypoxia in sedentary humans. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 301, R1078-R1087.	1.8	144
53	Mitochondrial respiratory control and early defects of oxidative phosphorylation in the failing human heart. International Journal of Biochemistry and Cell Biology, 2011, 43, 1729-1738.	2.8	158
54	Investigation Of Muscle Metabolism Of The Quadriceps Via High-resolution Respirometry and 31P MRS In Connection With A 10 Week Endurance Training. Medicine and Science in Sports and Exercise, 2011, 43, 71.	0.4	0

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55	Glucocorticoid-induced alterations in mitochondrial membrane properties and respiration in childhood acute lymphoblastic leukemia. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 719-725.	1.0	11
56	Muscle mitochondrial capacity exceeds maximal oxygen delivery in humans. <i>Mitochondrion</i> , 2011, 11, 303-307.	3.4	126
57	Endogenous Myoglobin in Breast Cancer Is Hypoxia-inducible by Alternative Transcription and Functions to Impair Mitochondrial Activity. <i>Journal of Biological Chemistry</i> , 2011, 286, 43417-43428.	3.4	43
58	Mitochondrial bioenergetic adaptations of breast cancer cells to aglycemia and hypoxia. <i>Journal of Bioenergetics and Biomembranes</i> , 2010, 42, 55-67.	2.3	104
59	Peritoneal Inflammation in Pigs is Associated with Early Mitochondrial Dysfunction in Liver and Kidney. <i>Inflammation</i> , 2010, 33, 295-305.	3.8	21
60	Kinetic model of the inhibition of respiration by endogenous nitric oxide in intact cells. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010, 1797, 557-565.	1.0	42
61	Mitochondrial Respiration And Reactive Oxygen Species In Acute Pulmonary Oxygen Sensing Of Pulmonary Arterial Smooth Muscle Cells. , 2010, , .		0
62	Temporal increase of platelet mitochondrial respiration is negatively associated with clinical outcome in patients with sepsis. <i>Critical Care</i> , 2010, 14, R214.	5.8	111
63	Cell Respiration Under Hypoxia: Facts and Artefacts in Mitochondrial Oxygen Kinetics. <i>Advances in Experimental Medicine and Biology</i> , 2010, 662, 7-25.	1.6	66
64	Abstract 440: Myoglobin in breast cancer: Regulation, function and relevance. , 2010, , .		5
65	Capacity of oxidative phosphorylation in human skeletal muscle. <i>International Journal of Biochemistry and Cell Biology</i> , 2009, 41, 1837-1845.	2.8	383
66	Deficiency or inhibition of oxygen sensor Phd1 induces hypoxia tolerance by reprogramming basal metabolism. <i>Nature Genetics</i> , 2008, 40, 170-180.	21.4	433
67	MITOCHONDRIAL ISCHEMIA-REPERFUSION INJURY OF THE TRANSPLANTED RAT HEART. <i>Shock</i> , 2008, 30, 365-371.	2.1	14
68	Preserved Coupling of Oxidative Phosphorylation But Decreased Mitochondrial Respiratory Capacity in IL-1 $\beta$ -Treated Human Peritoneal Mesothelial Cells. <i>Cell Biochemistry and Biophysics</i> , 2006, 44, 179-186.	1.8	46
69	DOES PREPARATION OF MITOCHONDRIA INFLUENCE THEIR FUNCTION? A STUDY ON CONTROL AND ENDOTOXIN CHALLENGED RATS. <i>Shock</i> , 2006, 26, 31-32.	2.1	0
70	Mitochondrial defects and heterogeneous cytochrome release after cardiac cold ischemia and reperfusion. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2004, 286, H1633-H1641.	3.2	145
71	Decreased affinity for oxygen of cytochrome-coxidase in Leigh syndrome caused by SURF1 mutations. <i>American Journal of Physiology - Cell Physiology</i> , 2004, 287, C1384-C1388.	4.6	39
72	Senescence-associated changes in respiration and oxidative phosphorylation in primary human fibroblasts. <i>Biochemical Journal</i> , 2004, 380, 919-928.	3.7	214

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73	Changes of mitochondrial respiration, mitochondrial content and cell size after induction of apoptosis in leukemia cells. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2003, 1642, 115-123.	4.1	101
74	Oxygen Conformance of Cellular Respiration. <i>Advances in Experimental Medicine and Biology</i> , 2003, 543, 39-55.	1.6	106
75	H2O2-mediated oxidative stress versus cold ischemia-reperfusion: mitochondrial respiratory defects in cultured human endothelial cells. <i>Transplantation</i> , 2002, 74, 1800-1803.	1.0	21
76	Evaluation of Mitochondrial Respiratory Function in Small Biopsies of Liver. <i>Analytical Biochemistry</i> , 2002, 305, 186-194.	2.4	117
77	Biphasic oxygen kinetics of cellular respiration and linear oxygen dependence of antimycin A inhibited oxygen consumption. <i>Molecular Biology Reports</i> , 2002, 29, 83-87.	2.3	22
78	Mitochondrial function in glucocorticoid triggered T-ALL cells with transgenic bcl-2 expression. <i>Molecular Biology Reports</i> , 2002, 29, 97-101.	2.3	16
79	Bioenergetics at low oxygen: dependence of respiration and phosphorylation on oxygen and adenosine diphosphate supply. <i>Respiration Physiology</i> , 2001, 128, 277-297.	2.7	234
80	Mitochondria in the Cold. , 2000, , 431-442.		114
81	Iron-dependent changes in cellular energy metabolism: influence on citric acid cycle and oxidative phosphorylation. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1999, 1413, 99-107.	1.0	243
82	Mitochondrial respiration in the low oxygen environment of the cell effect of ADP on oxygen kinetics. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1998, 1365, 249-254.	1.0	56
83	Title is missing!. <i>Molecular and Cellular Biochemistry</i> , 1997, 174, 71-78.	3.1	61
84	RESPIRATORY DEFECT AS AN EARLY EVENT IN PRESERVATION-REOXYGENATION INJURY OF ENDOTHELIAL CELLS1. <i>Transplantation</i> , 1997, 63, 136-142.	1.0	49
85	Control of mitochondrial and cellular respiration by oxygen. <i>Journal of Bioenergetics and Biomembranes</i> , 1995, 27, 583-596.	2.3	294
86	Anaerobic metabolism in aerobic mammalian cells: information from the ratio of calorimetric heat flux and respirometric oxygen flux. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1990, 1016, 328-332.	1.0	162
87	Mitochondrial function and mitochondrial heteroplasmy levels differ between benign and malignant prostate tissue.. <i>Endocrine Abstracts</i> , 0, , .	0.0	0