Mathias Ziegler

List of Publications by Year
in descending order

103	7,509	53794	54911
papers	citations	45 h-index	84 g-index

111	111	111	8944
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The power to reduce: pyridine nucleotides â€“ small molecules with a multitude of functions. Biochemical Journal, 2007, 402, 205-218.	3.7	607
2	The NAD metabolome â€” a key determinant of cancer cell biology. Nature Reviews Cancer, 2012, 12, 741-752.	28.4	487
3	The new life of a centenarian: signalling functions of NAD(P). Trends in Biochemical Sciences, 2004, 29, 111-118.	7.5	445
4	Separating NADH and NADPH fluorescence in live cells and tissues using FLIM. Nature Communications, 2014, 5, 3936.	12.8	428
5	Subcellular Compartmentation and Differential Catalytic Properties of the Three Human Nicotinamide Mononucleotide Adenylyltransferase Isoforms. Journal of Biological Chemistry, 2005, 280, 36334-36341.	3.4	414
6	New functions of a long-known molecule. FEBS Journal, 2000, 267, 1550-1564.	0.2	263
7	Pathways and Subcellular Compartmentation of NAD Biosynthesis in Human Cells. Journal of Biological Chemistry, 2011, 286, 21767-21778.	3.4	262
8	The human NAD metabolome: Functions, metabolism and compartmentalization. Critical Reviews in Biochemistry and Molecular Biology, 2015, 50, 284-297.	5.2	183
9	Structural and Functional Characterization of Human NAD Kinase. Biochemical and Biophysical Research Communications, 2001, 288, 69-74.	2.1	160
10	SLC25A51 is a mammalian mitochondrial NAD+ transporter. Nature, 2020, 588, 174-179.	27.8	158
11	NAD Kinase Levels Control the NADPH Concentration in Human Cells. Journal of Biological Chemistry, 2007, 282, 33562-33571.	3.4	157
12	The phosphate makes a difference: cellular functions of NADP. Redox Report, 2010, 15, 2-10.	4.5	151
13	Pathophysiological relevance of mitochondria in NAD+metabolism. FEBS Letters, 2001, 492, 4-8.	2.8	148
14	ATP for the DNA Ligation Step in Base Excision Repair Is Generated from Poly(ADP-ribose). Journal of Biological Chemistry, 2000, 275, 23234-23239.	3.4	126
15	NAD â€“ new roles in signalling and gene regulation in plants. New Phytologist, 2004, 163, 31-44.	7.3	122
16	Regulation of RNA Polymerase II-dependent Transcription by Poly(ADP-ribosyl)ation of Transcription Factors. Journal of Biological Chemistry, 1998, 273, 31644-31647.	3.4	114
17	A cellular survival switch: poly(ADP-ribosyl)ation stimulates DNA repair and silences transcription. BioEssays, 2001, 23, 543-548.	2.5	114
18	Characterization of recombinant human nicotinamide mononucleotide adenylyl transferase (NMNAT), a nuclear enzyme essential for NAD synthesis. FEBS Letters, 2001, 492, 95-100.	2.8	111

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19	Compartmentation of NAD⁺â€dependent signalling. FEBS Letters, 2011, 585, 1651-1656.	2.8	108
20	An Organellar NÎ±-Acetyltransferase, Naa60, Acetylates Cytosolic N Termini of Transmembrane Proteins and Maintains Golgi Integrity. Cell Reports, 2015, 10, 1362-1374.	6.4	105
21	Reconstitution of Yeast Silent Chromatin: Multiple Contact Sites and O-AADPR Binding Load SIR Complexes onto Nucleosomes In Vitro. Molecular Cell, 2009, 33, 323-334.	9.7	103
22	The NMN/NaMN adenylyltransferase (NMNAT) protein family. Frontiers in Bioscience - Landmark, 2009, Volume, 410.	3.0	101
23	Regulation of poly(ADP-ribose) polymerase 1 activity by the phosphorylation state of the nuclear NAD biosynthetic enzyme NMN adenylyl transferase 1. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3765-3770.	7.1	97
24	ADP-ribosylhydrolase 3 (ARH3), Not Poly(ADP-ribose) Glycohydrolase (PARG) Isoforms, Is Responsible for Degradation of Mitochondrial Matrix-associated Poly(ADP-ribose). Journal of Biological Chemistry, 2012, 287, 16088-16102.	3.4	96
25	Functional Localization of Two Poly(ADP-Ribose)-Degrading Enzymes to the Mitochondrial Matrix. Molecular and Cellular Biology, 2008, 28, 814-824.	2.3	95
26	Human Naa50p (Nat5/San) Displays Both Protein NÎ±- and NÏµ-Acetyltransferase Activity. Journal of Biological Chemistry, 2009, 284, 31122-31129.	3.4	90
27	<scp>NAD</scp> and <scp>ADP</scp>â€ribose metabolism in mitochondria. FEBS Journal, 2013, 280, 3530-3541.	4.7	86
28	Insect immune activation by recombinant Galleria mellonella apolipophorin III. BBA - Proteins and Proteomics, 1999, 1433, 16-26.	2.1	77
29	Emerging Roles of NAD ⁺ and Its Metabolites in Cell SignalingA report on the NAD2008 symposium, Hamburg, Germany, 14 to 17 September 2008.. Science Signaling, 2009, 2, mr1.	3.6	71
30	Emerging Functions of Extracellular Pyridine Nucleotides. Molecular Medicine, 2006, 12, 324-327.	4.4	70
31	A Novel Function of Poly(ADP-ribosyl)ation:Â Silencing of RNA Polymerase II-Dependent Transcriptionâ€. Biochemistry, 1998, 37, 1465-1469.	2.5	68
32	Generation, Release, and Uptake of the NAD Precursor Nicotinic Acid Riboside by Human Cells. Journal of Biological Chemistry, 2015, 290, 27124-27137.	3.4	68
33	Visualization of subcellular NAD pools and intra-organellar protein localization by poly-ADP-ribose formation. Cellular and Molecular Life Sciences, 2010, 67, 433-443.	5.4	66
34	Insect Immune Activation by Apolipophorin III Is Correlated with the Lipid-Binding Properties of This Proteinâ€. Biochemistry, 2001, 40, 11502-11508.	2.5	63
35	ATP-dependent selection between single nucleotide and long patch base excision repair. DNA Repair, 2003, 2, 1101-1114.	2.8	61
36	Subcellular Distribution of NAD+ between Cytosol and Mitochondria Determines the Metabolic Profile of Human Cells. Journal of Biological Chemistry, 2015, 290, 27644-27659.	3.4	58

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37	Keeping the balance in NAD metabolism. Biochemical Society Transactions, 2019, 47, 119-130.	3.4	58
38	NAD Biosynthesis in Humans - Enzymes, Metabolites and Therapeutic Aspects. Current Topics in Medicinal Chemistry, 2013, 13, 2907-2917.	2.1	56
39	Identification of the Nicotinamide Salvage Pathway as a New Toxification Route for Antimetabolites. Cell Chemical Biology, 2018, 25, 471-482.e7.	5.2	55
40	Isoform-specific Targeting and Interaction Domains in Human Nicotinamide Mononucleotide Adenylyltransferases. Journal of Biological Chemistry, 2010, 285, 18868-18876.	3.4	54
41	Pathway analysis of NAD+ metabolism. Biochemical Journal, 2011, 439, 341-348.	3.7	53
42	Identification of bovine liver mitochondrial NAD+ glycohydrolase as ADP-ribosyl cyclase. Biochemical Journal, 1997, 326, 401-405.	3.7	52
43	Poly(ADP-ribosylation) and genomic stability. Biochemistry and Cell Biology, 2005, 83, 263-269.	2.0	51
44	Regulation of SIRT2-dependent Î±-tubulin deacetylation by cellular NAD levels. DNA Repair, 2014, 23, 33-38.	2.8	51
45	Proteinâ^'Protein Interaction of the Human Poly(ADP-ribosyl)transferase Depends on the Functional State of the Enzyme. Biochemistry, 1997, 36, 7297-7304.	2.5	49
46	NAD kinase controls animal NADP biosynthesis and is modulated via evolutionarily divergent calmodulin-dependent mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1386-1391.	7.1	49
47	Model of Tryptophan Metabolism, Readily Scalable Using Tissue-specific Gene Expression Data. Journal of Biological Chemistry, 2013, 288, 34555-34566.	3.4	48
48	Constitutive Nuclear Localization of an Alternatively Spliced Sirtuin-2 Isoform. Journal of Molecular Biology, 2014, 426, 1677-1691.	4.2	48
49	NAD⁺ biosynthesis and salvage â€“ a phylogenetic perspective. FEBS Journal, 2012, 279, 3355-3363.	4.7	47
50	Carbohydrate metabolism during vertebrate appendage regeneration: What is its role? How is it regulated?. BioEssays, 2014, 36, 27-33.	2.5	43
51	Identification of evolutionary and kinetic drivers of NAD-dependent signaling. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15957-15966.	7.1	43
52	Stimulation of the catalytic activity of poly(ADP-ribosyl) transferase by transcription factor Yin Yang 1. FEBS Letters, 1999, 443, 20-24.	2.8	39
53	Diseaseâ€specific phenotypes in <scp>iPSC</scp> â€derived neural stem cells with <scp>POLG</scp> mutations. EMBO Molecular Medicine, 2020, 12, e12146.	6.9	38
54	Crystal structure of human nicotinamide mononucleotide adenylyltransferase in complex with NMN. FEBS Letters, 2002, 516, 239-244.	2.8	36

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55	NAD+ surfaces again. Biochemical Journal, 2004, 382, e5-6.	3.7	35
56	Functional Interaction of Poly(ADP-ribose) with the 20S Proteasome in Vitro. Biochemical and Biophysical Research Communications, 1999, 259, 576-581.	2.1	33
57	Degradation of Extracellular NAD+ Intermediates in Cultures of Human HEK293 Cells. Metabolites, 2019, 9, 293.	2.9	32
58	Equilibrative Nucleoside Transporters Mediate the Import of Nicotinamide Riboside and Nicotinic Acid Riboside into Human Cells. International Journal of Molecular Sciences, 2021, 22, 1391.	4.1	32
59	Targeting NAD+ in translational research to relieve diseases and conditions of metabolic stress and ageing. Mechanisms of Ageing and Development, 2020, 186, 111208.	4.6	31
60	Refinement of a radioreceptor binding assay for nicotinic acid adenine dinucleotide phosphate. Analytical Biochemistry, 2007, 371, 26-36.	2.4	28
61	Proteomic response of human neuroblastoma cells to azaspiracid-1. Journal of Proteomics, 2009, 72, 695-707.	2.4	28
62	The balance between NAD+ biosynthesis and consumption in ageing. Mechanisms of Ageing and Development, 2021, 199, 111569.	4.6	28
63	SIRT2 inactivation reveals a subset of hyperacetylated perinuclear microtubules inaccessible to HDAC6. Journal of Cell Science, 2016, 129, 2972-82.	2.0	27
64	The PHD finger of p300 Influences Its Ability to Acetylate Histone and Non-Histone Targets. Journal of Molecular Biology, 2014, 426, 3960-3972.	4.2	26
65	N-terminal Acetylation Levels Are Maintained During Acetyl-CoA Deficiency in Saccharomyces cerevisiae. Molecular and Cellular Proteomics, 2018, 17, 2309-2323.	3.8	25
66	Characterization of Detergent-Solubilized Beef Liver Mitochondrial NAD+ Glycohydrolase and Its Truncated Hydrosoluble Form. Biochemistry, 1996, 35, 5207-5212.	2.5	24
67	NAD Metabolome Analysis in Human Cells Using 1H NMR Spectroscopy. International Journal of Molecular Sciences, 2018, 19, 3906.	4.1	24
68	Progress in the Function and Regulation of ADP-RibosylationA report on the 18th International Conference on ADP-Ribosylation, Zurich, Switzerland, 18 to 21 August 2010.. Science Signaling, 2011, 4, mr5.	3.6	23
69	NAD+analogs substituted in the purine base as substrates for poly(ADP-ribosyl) transferase. FEBS Letters, 1996, 397, 17-21.	2.8	22
70	Enzymic, cysteine-specific ADP-ribosylation in bovine liver mitochondria. Biochemical Journal, 1998, 332, 189-193.	3.7	22
71	Sirtuin 2 enhances allergic asthmatic inflammation. JCI Insight, 2019, 4, .	5.0	22
72	A vital link between energy and signal transduction. Regulatory functions of NAD(P). FEBS Journal, 2005, 272, 4561-4564.	4.7	20

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73	Application of reverse-phase HPLC to quantify oligopeptide acetylation eliminates interference from unspecific acetyl CoA hydrolysis. BMC Proceedings, 2009, 3, S5.	1.6	19
74	Instability in NAD+ metabolism leads to impaired cardiac mitochondrial function and communication. ELife, 2021, 10, .	6.0	19
75	Welcome to the Family: Identification of the NAD+ Transporter of Animal Mitochondria as Member of the Solute Carrier Family SLC25. Biomolecules, 2021, 11, 880.	4.0	18
76	Optimization of the ion-pair high-performance liquid chromatographic separation of purine derivatives in erythrocytes, thymocytes and liver mitochondria. Biomedical Applications, 1988, 434, 447-453.	1.7	17
77	Application of a coupled enzyme assay to characterize nicotinamide riboside kinases. Analytical Biochemistry, 2009, 385, 377-379.	2.4	16
78	Sequence divergence and diversity suggests ongoing functional diversification of vertebrate NAD metabolism. DNA Repair, 2014, 23, 39-48.	2.8	15
79	Time sensing by NAADP receptors. Biochemical Journal, 2006, 397, 313-320.	3.7	12
80	Enzymatic and Chemical Syntheses of Vacor Analogs of Nicotinamide Riboside, NMN and NAD. Biomolecules, 2021, 11, 1044.	4.0	12
81	The catabolism of endogenous adenine nucleotides in rat liver mitochondria. Molecular and Cellular Biochemistry, 1990, 93, 7-12.	3.1	10
82	Detection and identification of NAD-catabolizing activities in rat tissue homogenates. BBA - Proteins and Proteomics, 1997, 1340, 7-12.	2.1	10
83	Compartment-Specific Poly-ADP-Ribose Formation as a Biosensor for Subcellular NAD Pools. Methods in Molecular Biology, 2017, 1608, 45-56.	0.9	9
84	Adenosine formation by isolated rat kidney mitochondria. FEBS Letters, 1989, 254, 5-7.	2.8	7
85	Mitochondrial metabolism of guanine nucleotides possible role of guanosine. FEBS Letters, 1989, 248, 182-184.	2.8	6
86	Discovery of fungal surface NADases predominantly present in pathogenic species. Nature Communications, 2021, 12, 1631.	12.8	6
87	Application of ion-pair high-performance liquid chromatography with radioisotope detection to in vitro studies of nucleoside metabolism in mitochondria. Biomedical Applications, 1991, 563, 172-177.	1.7	5
88	NAD on the rise again. Nature Metabolism, 2020, 2, 291-292.	11.9	5
89	Characterization of Hydrosoluble and Detergent-Solubilized Forms of Mitochondrial NAD+ Glycohydrolase from Bovine Liver. Advances in Experimental Medicine and Biology, 1997, 419, 447-451.	1.6	5
90	Bovine Liver Mitochondrial NAD+ Glycohydrolase. Advances in Experimental Medicine and Biology, 1997, , 443-446.	1.6	4

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91	POLG mutations lead to abnormal mitochondrial remodeling during neural differentiation of human pluripotent stem cells via SIRT3/AMPK pathway inhibition. Cell Cycle, 2022, 21, 1178-1193.	2.6	3
92	Early Evolutionary Selection of NAD Biosynthesis Pathway in Bacteria. Metabolites, 2022, 12, 569.	2.9	3
93	Comparing the mitochondrial signatures in ESCs and iPSCs and their neural derivations. Cell Cycle, 2022, 21, 2206-2221.	2.6	3
94	Crystallization and preliminary X-ray analysis of human nicotinamide mononucleotide adenylyltransferase (NMNAT). Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 140-142.	2.5	2
95	Pharmacology of ADP-ribosylation. FEBS Journal, 2013, 280, 3542-3542.	4.7	2
96	Physiology of ADP-ribosylation. FEBS Journal, 2013, 280, 3483-3483.	4.7	2
97	Combined Metabolic and Chemical (CoMetChem) Labeling Using Stable Isotopesâ€"a Strategy to Reveal Site-Specific Histone Acetylation and Deacetylation Rates by LCâ€"MS. Analytical Chemistry, 2021, 93, 12872-12880.	6.5	2
98	NAD: Metabolism and Regulatory Functions. , 2006, , 132-140.		2
99	Kinetic and oligomeric study of Leishmania braziliensis nicotinate/nicotinamide mononucleotide adenylyltransferase. Heliyon, 2020, 6, e03733.	3.2	1
100	Mechanisms Accounting for Changes of Adenine Nucleotide Content in Mitochondria at Ischemia. Advances in Experimental Medicine and Biology, 1991, 309A, 309-312.	1.6	1
101	Corrigendum to: Crystal structure of human nicotinamide mononucleotide adenylyltransferase in complex with NMN (FEBS 25964). FEBS Letters, 2002, 523, 254-255.	2.8	0
102	ARH3 catalyzes degradation of mitochondrial matrixaccumulated Poly (ADPâ€ribose). FASEB Journal, 2012, 26, 565.9.	0.5	0
103	Dynamics in the Purine Nucleotides of Liver During Various Periods of Hypoxia/Ischaemia and Reoxygenation. Advances in Experimental Medicine and Biology, 1991, 309A, 259-264.	1.6	0