

# Narayan G Avadhani

## List of Publications by Year in descending order

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100  
papers

9,519  
citations

47006

47  
h-index

37204

96  
g-index

104  
all docs

104  
docs citations

104  
times ranked

12659  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mitochondrial Import and Accumulation of $\alpha$ -Synuclein Impair Complex I in Human Dopaminergic Neuronal Cultures and Parkinson Disease Brain. <i>Journal of Biological Chemistry</i> , 2008, 283, 9089-9100.	3.4	870
2	Function of Mitochondrial Stat3 in Cellular Respiration. <i>Science</i> , 2009, 323, 793-797.	12.6	860
3	Mitochondrial Signaling. <i>Molecular Cell</i> , 2004, 14, 1-15.	9.7	807
4	Mitochondrial targeting and a novel transmembrane arrest of Alzheimer's amyloid precursor protein impairs mitochondrial function in neuronal cells. <i>Journal of Cell Biology</i> , 2003, 161, 41-54.	5.2	519
5	Cytochrome c oxidase dysfunction in oxidative stress. <i>Free Radical Biology and Medicine</i> , 2012, 53, 1252-1263.	2.9	280
6	Mitochondrial dysfunction and mitochondrial dynamics-The cancer connection. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 602-614.	1.0	276
7	Blocking FSH induces thermogenic adipose tissue and reduces body fat. <i>Nature</i> , 2017, 546, 107-112.	27.8	250
8	Mitochondrial stress-induced calcium signaling, phenotypic changes and invasive behavior in human lung carcinoma A549 cells. <i>Oncogene</i> , 2002, 21, 7839-7849.	5.9	229
9	Targeting mitochondrial biogenesis to overcome drug resistance to MAPK inhibitors. <i>Journal of Clinical Investigation</i> , 2016, 126, 1834-1856.	8.2	219
10	Elevated Mitochondrial Cytochrome P450 2E1 and Glutathione S-Transferase A4-4 in Streptozotocin-Induced Diabetic Rats: Tissue-Specific Variations and Roles in Oxidative Stress. <i>Diabetes</i> , 2004, 53, 185-194.	0.6	180
11	Protein Kinase A-mediated Phosphorylation Modulates Cytochrome c Oxidase Function and Augments Hypoxia and Myocardial Ischemia-related Injury. <i>Journal of Biological Chemistry</i> , 2006, 281, 2061-2070.	3.4	178
12	Mitochondria to nucleus stress signaling. <i>Journal of Cell Biology</i> , 2003, 161, 507-519.	5.2	169
13	Mitochondrial retrograde signaling at the crossroads of tumor bioenergetics, genetics and epigenetics. <i>Mitochondrion</i> , 2013, 13, 577-591.	3.4	168
14	Doxorubicin Inactivates Myocardial Cytochrome c Oxidase in Rats: Cardioprotection by Mito-Q. <i>Biophysical Journal</i> , 2009, 96, 1388-1398.	0.5	160
15	A new function for CD38/ADP-ribosyl cyclase in nuclear Ca <sup>2+</sup> homeostasis. <i>Nature Cell Biology</i> , 1999, 1, 409-414.	10.3	159
16	Multiple isoforms of mitochondrial glutathione S-transferases and their differential induction under oxidative stress. <i>Biochemical Journal</i> , 2002, 366, 45-55.	3.7	152
17	Mitochondria-to-nucleus stress signaling in mammalian cells: Nature of nuclear gene targets, transcription regulation, and induced resistance to apoptosis. <i>Gene</i> , 2005, 354, 132-139.	2.2	137
18	Targeting of NH <sub>2</sub> -terminal $\alpha$ -processed Microsomal Protein to Mitochondria: A Novel Pathway for the Biogenesis of Hepatic Mitochondrial P450MT2. <i>Journal of Cell Biology</i> , 1997, 139, 589-599.	5.2	136

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19	Bimodal Targeting of Mitochondrial CYP2E1 to Mitochondria through Activation of an N-terminal Chimeric Signal by cAMP-mediated Phosphorylation. <i>Journal of Biological Chemistry</i> , 2002, 277, 40583-40593.	3.4	135
20	A cDNA Encoding a Rat Mitochondrial Cytochrome P450 Catalyzing Both the 26-Hydroxylation of Cholesterol and 25-Hydroxylation of Vitamin D <sub>3</sub> : Gonadotropic Regulation of the Cognate mRNA in Ovaries. <i>DNA and Cell Biology</i> , 1990, 9, 657-665.	1.9	131
21	Preferential effects of nicotine and 4-(N-methyl- N-nitrosamino)-1-(3-pyridyl)-1-butanone on mitochondrial glutathione S-transferase a4-4 induction and increased oxidative stress in the rat brain. <i>Biochemical Pharmacology</i> , 1998, 56, 831-839.	4.4	121
22	Structural Organization and Transcription Regulation of Nuclear Genes Encoding the Mammalian Cytochrome c Oxidase Complex. <i>Progress in Molecular Biology and Translational Science</i> , 1998, 61, 309-344.	1.9	120
23	Impaired Mitochondrial Respiratory Functions and Oxidative Stress in Streptozotocin-Induced Diabetic Rats. <i>International Journal of Molecular Sciences</i> , 2011, 12, 3133-3147.	4.1	115
24	Three-Dimensional Organoids Reveal Therapy Resistance of Esophageal and Oropharyngeal Squamous Cell Carcinoma Cells. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , 2019, 7, 73-91.	4.5	102
25	Phosphorylation Enhances Mitochondrial Targeting of GSTA4-4 through Increased Affinity for Binding to Cytoplasmic Hsp70. <i>Journal of Biological Chemistry</i> , 2003, 278, 18960-18970.	3.4	101
26	Role of mitochondrial reactive oxygen species in osteoclast differentiation. <i>Annals of the New York Academy of Sciences</i> , 2010, 1192, 245-252.	3.8	101
27	Smoke carcinogens cause bone loss through the aryl hydrocarbon receptor and induction of Cyp1 enzymes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 11115-11120.	7.1	101
28	Localization of Multiple Forms of Inducible Cytochromes P450 in Rat Liver Mitochondria: Immunological Characteristics and Patterns of Xenobiotic Substrate Metabolism. <i>Archives of Biochemistry and Biophysics</i> , 1997, 339, 136-150.	3.0	99
29	Mitochondria-targeted heme oxygenase-1 induces oxidative stress and mitochondrial dysfunction in macrophages, kidney fibroblasts and in chronic alcohol hepatotoxicity. <i>Redox Biology</i> , 2014, 2, 273-283.	9.0	97
30	Mitochondria-targeted Cytochrome P450 2E1 Induces Oxidative Damage and Augments Alcohol-mediated Oxidative Stress. <i>Journal of Biological Chemistry</i> , 2010, 285, 24609-24619.	3.4	95
31	Mitochondrial Targeted Cytochrome P450 2E1 (P450 MT5) Contains an Intact N Terminus and Requires Mitochondrial Specific Electron Transfer Proteins for Activity. <i>Journal of Biological Chemistry</i> , 2001, 276, 24680-24689.	3.4	93
32	Site specific phosphorylation of cytochromecoxidase subunits I, IV1 and Vb in rabbit hearts subjected to ischemia/reperfusion. <i>FEBS Letters</i> , 2007, 581, 1302-1310.	2.8	91
33	Competitive and Noncompetitive Inhibition of Myocardial Cytochrome C Oxidase in Sepsis. <i>Shock</i> , 2004, 21, 110-114.	2.1	91
34	Dioxin-mediated tumor progression through activation of mitochondria-to-nucleus stress signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 186-191.	7.1	86
35	Bimodal targeting of cytochrome P450s to endoplasmic reticulum and mitochondria: the concept of chimeric signals. <i>FEBS Journal</i> , 2011, 278, 4218-4229.	4.7	80
36	Role of nuclear-encoded subunit Vb in the assembly and stability of cytochrome c oxidase complex: implications in mitochondrial dysfunction and ROS production. <i>Biochemical Journal</i> , 2009, 420, 439-449.	3.7	76

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37	Adaptive changes in the expression of nuclear and mitochondrial encoded subunits of cytochrome c oxidase and the catalytic activity during hypoxia. <i>FEBS Journal</i> , 2003, 270, 871-879.	0.2	73
38	Mitochondrial Targeting of Cytochrome P450 (CYP) 1B1 and Its Role in Polycyclic Aromatic Hydrocarbon-induced Mitochondrial Dysfunction. <i>Journal of Biological Chemistry</i> , 2014, 289, 9936-9951.	3.4	71
39	Bimodal targeting of microsomal cytochrome P450s to mitochondria: implications in drug metabolism and toxicity. <i>Expert Opinion on Drug Metabolism and Toxicology</i> , 2010, 6, 1231-1251.	3.3	66
40	Activation of Akt Is Essential for the Propagation of Mitochondrial Respiratory Stress Signaling and Activation of the Transcriptional Coactivator Heterogeneous Ribonucleoprotein A2. <i>Molecular Biology of the Cell</i> , 2010, 21, 3578-3589.	2.1	63
41	Metabolism of 1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine by Mitochondrion-targeted Cytochrome P450 2D6. <i>Journal of Biological Chemistry</i> , 2013, 288, 4436-4451.	3.4	63
42	Oxidative Stress Induced Mitochondrial Protein Kinase A Mediates Cytochrome C Oxidase Dysfunction. <i>PLoS ONE</i> , 2013, 8, e77129.	2.5	63
43	Mitochondria-targeted paraquat and metformin mediate ROS production to induce multiple pathways of retrograde signaling: A dose-dependent phenomenon. <i>Redox Biology</i> , 2020, 36, 101606.	9.0	59
44	Variations in the subunit content and catalytic activity of the cytochrome c oxidase complex from different tissues and different cardiac compartments. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1998, 1371, 71-82.	2.6	57
45	Aggressive triple negative breast cancers have unique molecular signature on the basis of mitochondrial genetic and functional defects. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2018, 1864, 1060-1071.	3.8	57
46	A Distinctive Physiological Role for $\text{H}^{\circ}\text{B}^{\circ}$ in the Propagation of Mitochondrial Respiratory Stress Signaling. <i>Journal of Biological Chemistry</i> , 2008, 283, 12586-12594.	3.4	56
47	Activation of a Novel Calcineurin-mediated Insulin-like Growth Factor-1 Receptor Pathway, Altered Metabolism, and Tumor Cell Invasion in Cells Subjected to Mitochondrial Respiratory Stress. <i>Journal of Biological Chemistry</i> , 2007, 282, 14536-14546.	3.4	51
48	Roles of Cytochrome P450 in Metabolism of Ethanol and Carcinogens. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1032, 15-35.	1.6	49
49	Heterogeneous Nuclear Ribonucleoprotein A2 Is a Common Transcriptional Coactivator in the Nuclear Transcription Response to Mitochondrial Respiratory Stress. <i>Molecular Biology of the Cell</i> , 2009, 20, 4107-4119.	2.1	48
50	Dual Targeting Property of the N-terminal Signal Sequence of P4501A1. <i>Journal of Biological Chemistry</i> , 1999, 274, 24014-24022.	3.4	46
51	Qualitative and comparative nature of mitochondrial translation products in mammalian cells. <i>Biochemistry</i> , 1982, 21, 2452-2460.	2.5	44
52	Physiological Role of the N-terminal Processed P4501A1 Targeted to Mitochondria in Erythromycin Metabolism and Reversal of Erythromycin-mediated Inhibition of Mitochondrial Protein Synthesis. <i>Journal of Biological Chemistry</i> , 1999, 274, 6617-6625.	3.4	44
53	Role of calcineurin, hnRNPA2 and Akt in mitochondrial respiratory stress-mediated transcription activation of nuclear gene targets. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010, 1797, 1055-1065.	1.0	44
54	Human Cytochrome P450 2E1 Mutations That Alter Mitochondrial Targeting Efficiency and Susceptibility to Ethanol-induced Toxicity in Cellular Models. <i>Journal of Biological Chemistry</i> , 2013, 288, 12627-12644.	3.4	42

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55	Hypoxia-Mediated Mitochondrial Stress in RAW264.7 Cells Induces Osteoclast-Like TRAP-Positive Cells. <i>Annals of the New York Academy of Sciences</i> , 2007, 1117, 51-61.	3.8	41
56	Bimodal Protein Targeting through Activation of Cryptic Mitochondrial Targeting Signals by an Inducible Cytosolic Endoprotease. <i>Molecular Cell</i> , 2008, 32, 32-42.	9.7	41
57	The Effects of Smoke Carcinogens on Bone. <i>Current Osteoporosis Reports</i> , 2011, 9, 202-209.	3.6	40
58	Identification of genetic variants of human cytochrome P450 2D6 with impaired mitochondrial targeting. <i>Molecular Genetics and Metabolism</i> , 2010, 99, 90-97.	1.1	39
59	Constitutive and Inducible Cytochromes P450 in Rat Lung Mitochondria: Xenobiotic Induction, Relative Abundance, and Catalytic Properties. <i>Toxicology and Applied Pharmacology</i> , 1999, 156, 231-240.	2.8	38
60	Mitochondrial LON protease-dependent degradation of cytochrome c oxidase subunits under hypoxia and myocardial ischemia. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 519-528.	1.0	37
61	Cloning and characterization of the mouse cytochrome c oxidase subunit IV gene. <i>Archives of Biochemistry and Biophysics</i> , 1991, 288, 97-106.	3.0	36
62	Tissue variant effects of heme inhibitors on the mouse cytochrome c oxidase gene expression and catalytic activity of the enzyme complex. <i>FEBS Journal</i> , 1999, 266, 191-200.	0.2	35
63	Knock-In Mouse Lines Expressing either Mitochondrial or Microsomal CYP1A1: Differing Responses to Dietary Benzo[ <i>a</i> ]pyrene as Proof of Principle. <i>Molecular Pharmacology</i> , 2009, 75, 555-567.	2.3	35
64	Accumulation of Mitochondrial P450MT2, NH2-terminal Truncated Cytochrome P4501A1 in Rat Brain during Chronic Treatment with $\beta$ -Naphthoflavone. <i>Journal of Biological Chemistry</i> , 2000, 275, 34415-34423.	3.4	34
65	Interaction of Adrenodoxin with P4501A1 and Its Truncated Form P450MT2 through Different Domains: Differential Modulation of Enzyme Activities. <i>Biochemistry</i> , 1998, 37, 1150-1160.	2.5	32
66	HnRNPA2 is a novel histone acetyltransferase that mediates mitochondrial stress-induced nuclear gene expression. <i>Cell Discovery</i> , 2016, 2, 16045.	6.7	32
67	Mitochondrial targeting of intact CYP2B1 and CYP2E1 and N-terminal truncated CYP1A1 proteins in <i>Saccharomyces cerevisiae</i> : role of protein kinase A in the mitochondrial targeting of CYP2E1. <i>FEBS Journal</i> , 2007, 274, 4615-4630.	4.7	30
68	Role of Protein Kinase C-mediated Protein Phosphorylation in Mitochondrial Translocation of Mouse CYP1A1, Which Contains a Non-canonical Targeting Signal. <i>Journal of Biological Chemistry</i> , 2006, 281, 30834-30847.	3.4	29
69	Novel biochemical and functional insights into nuclear $Ca^{2+}$ transport through IP <sub>3</sub> Rs and RyRs in osteoblasts. <i>American Journal of Physiology - Renal Physiology</i> , 2000, 278, F784-F791.	2.7	28
70	Human liver mitochondrial cytochrome P450 2D6 individual variations and implications in drug metabolism. <i>FEBS Journal</i> , 2009, 276, 3440-3453.	4.7	28
71	Additive Effects of Mitochondrion-targeted Cytochrome CYP2E1 and Alcohol Toxicity on Cytochrome c Oxidase Function and Stability of Respirosome Complexes. <i>Journal of Biological Chemistry</i> , 2012, 287, 15284-15297.	3.4	27
72	The Role of an E Box Binding Basic Helix Loop Helix Protein in the Cardiac Muscle-specific Expression of the Rat Cytochrome Oxidase Subunit VIII Gene. <i>Journal of Biological Chemistry</i> , 1996, 271, 30281-30289.	3.4	26

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73	Localization of a transcription promoter within the second exon of the cytochrome P-450c27/25 gene for the expression of the major species of two-kilobase mRNA. <i>Biochemistry</i> , 1995, 34, 13729-13742.	2.5	23
74	Mitochondrial Targeting of Cytochrome P450 Proteins Containing NH2-terminal Chimeric Signals Involves an Unusual TOM20/TOM22 Bypass Mechanism. <i>Journal of Biological Chemistry</i> , 2009, 284, 17352-17363.	3.4	22
75	Silencing of l k B $\beta$ mRNA causes disruption of mitochondrial retrograde signaling and suppression of tumor growth in vivo. <i>Carcinogenesis</i> , 2012, 33, 1762-1768.	2.8	21
76	Regulation of Murine Cytochrome c Oxidase Vb Gene Expression during Myogenesis. <i>Journal of Biological Chemistry</i> , 2004, 279, 35242-35254.	3.4	19
77	Transport of proteins into hepatic and nonhepatic mitochondria: specificity of uptake and processing of precursor forms of carbamoyl-phosphate synthetase. <i>Biochemistry</i> , 1985, 24, 8107-8113.	2.5	18
78	Alcohol-induced CYP2E1, mitochondrial dynamics and retrograde signaling in human hepatic 3D organoids. <i>Free Radical Biology and Medicine</i> , 2020, 159, 1-14.	2.9	18
79	[57] Constitutive and inducible forms of cytochrome P450 from hepatic mitochondria. <i>Methods in Enzymology</i> , 1991, 206, 587-594.	1.0	17
80	Mitochondrial respiratory defects promote the Warburg effect and cancer progression. <i>Molecular and Cellular Oncology</i> , 2016, 3, e1085120.	0.7	17
81	Cytochrome c oxidase dysfunction enhances phagocytic function and osteoclast formation in macrophages. <i>FASEB Journal</i> , 2019, 33, 9167-9181.	0.5	16
82	Defects in cytochrome c oxidase expression induce a metabolic shift to glycolysis and carcinogenesis. <i>Genomics Data</i> , 2015, 6, 99-107.	1.3	15
83	<i>Î²</i>-Naphthoflavone-Induced Mitochondrial Respiratory Damage in Cyp1 Knockout Mouse and in Cell Culture Systems: Attenuation by Resveratrol Treatment. <i>Oxidative Medicine and Cellular Longevity</i> , 2017, 2017, 1-13.	4.0	14
84	Mitochondrial genome and functional defects in osteosarcoma are associated with their aggressive phenotype. <i>PLoS ONE</i> , 2018, 13, e0209489.	2.5	13
85	Nucleotide sequence of cDNA for nuclear encoded subunit Vb of mouse cytochrome-c oxidase. <i>Biochimica Et Biophysica Acta Gene Regulatory Mechanisms</i> , 1990, 1087, 98-100.	2.4	12
86	Targeting of Splice Variants of Human Cytochrome P450 2C8 (CYP2C8) to Mitochondria and Their Role in Arachidonic Acid Metabolism and Respiratory Dysfunction. <i>Journal of Biological Chemistry</i> , 2014, 289, 29614-29630.	3.4	12
87	hnRNPA2 mediated acetylation reduces telomere length in response to mitochondrial dysfunction. <i>PLoS ONE</i> , 2018, 13, e0206897.	2.5	12
88	Cigarette Smoke Toxins-Induced Mitochondrial Dysfunction and Pancreatitis Involves Aryl Hydrocarbon Receptor Mediated Cyp1 Gene Expression: Protective Effects of Resveratrol. <i>Toxicological Sciences</i> , 2018, 166, 428-440.	3.1	12
89	ALDH2 modulates autophagy flux to regulate acetaldehyde-mediated toxicity thresholds. <i>American Journal of Cancer Research</i> , 2016, 6, 781-96.	1.4	12
90	Mitochondrially targeted cytochrome P450 2D6 is involved in monomethylamine-induced neuronal damage in mouse models. <i>Journal of Biological Chemistry</i> , 2019, 294, 10336-10348.	3.4	10

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91	Targeting of the same proteins to multiple subcellular destinations: mechanisms and physiological implications. FEBS Journal, 2011, 278, 4217-4217.	4.7	9
92	Enhanced osteoclastogenesis by mitochondrial retrograde signaling through transcriptional activation of the cathepsin K gene. Annals of the New York Academy of Sciences, 2016, 1364, 52-61.	3.8	9
93	Dysregulation of RyR Calcium Channel Causes the Onset of Mitochondrial Retrograde Signaling. IScience, 2020, 23, 101370.	4.1	8
94	YY1 control of mitochondrial-related genes does not account for regulation of immunoglobulin class switch recombination in mice. European Journal of Immunology, 2020, 50, 822-838.	2.9	7
95	The transport and processing of carbamyl phosphate synthetase-I in mouse hepatic mitochondria. Biochemical and Biophysical Research Communications, 1984, 118, 514-522.	2.1	5
96	Esophageal 3D organoids of <i>MPV17-/-</i> mouse model of mitochondrial DNA depletion show epithelial cell plasticity and telomere attrition. Oncotarget, 2019, 10, 6245-6259.	1.8	5
97	Mitochondrial Glutathione S-Transferase Pool in Health and Disease. , 2006, , 277-291.		1
98	Bimodal targeting of human cytochrome P450 2D6 to mitochondria and microsomes: A pharmacogenomic approach for identifying genetic variants defective in mitochondrial targeting. FASEB Journal, 2006, 20, A264.	0.5	1
99	Hypoxia induced mitochondrial stress signaling promotes osteoclastogenesis in murine macrophages. FASEB Journal, 2006, 20, A120.	0.5	0
100	Role of Polycyclic Aromatic Hydrocarbons and Aryl Hydrocarbon Receptor Activation in Bone Loss. , 2020, , 311-318.		0