Renu A Kowluru

List of Publications by Year
in descending order

132 papers	11,011 citations	30070 54 h-index	45317 90 g-index
136 all docs	136 docs citations	136 times ranked	7803 citing authors

#	Article	IF	Citations
1	Epigenetic modifications in diabetes. Metabolism: Clinical and Experimental, 2022, 126, 154920.	3.4	26
2	Mitochondrial Fragmentation in a High Homocysteine Environment in Diabetic Retinopathy. Antioxidants, 2022, 11, 365.	5.1	8
3	Mitochondrial Dynamics in the Metabolic Memory of Diabetic Retinopathy. Journal of Diabetes Research, 2022, 2022, 1-14.	2.3	12
4	Involvement of High Mobility Group Box 1 Protein in Optic Nerve Damage in Diabetes. Eye and Brain, 2022, Volume 14, 59-69.	2.5	0
5	Long Noncoding RNAs and Mitochondrial Homeostasis in the Development of Diabetic Retinopathy. Frontiers in Endocrinology, 2022, 13, .	3.5	1
6	Long Noncoding RNA <i>MALAT1</i> and Regulation of the Antioxidant Defense System in Diabetic Retinopathy. Diabetes, 2021, 70, 227-239.	0.6	81
7	Diabetic Retinopathy and NADPH Oxidase-2: A Sweet Slippery Road. Antioxidants, 2021, 10, 783.	5.1	17
8	Regulation of Rac1 transcription by histone and DNA methylation in diabetic retinopathy. Scientific Reports, 2021, 11, 14097.	3.3	15
9	Nuclear Genome-Encoded Long Noncoding RNAs and Mitochondrial Damage in Diabetic Retinopathy. Cells, 2021, 10, 3271.	4.1	19
10	Mitochondrial Defects Drive Degenerative Retinal Diseases. Trends in Molecular Medicine, 2020, 26, 105-118.	6.7	86
11	Diabetic Retinopathy: Mitochondria Caught in a Muddle of Homocysteine. Journal of Clinical Medicine, 2020, 9, 3019.	2.4	12
12	Homocysteine Disrupts Balance between MMP-9 and Its Tissue Inhibitor in Diabetic Retinopathy: The Role of DNA Methylation. International Journal of Molecular Sciences, 2020, 21, 1771.	4.1	25
13	Faulty homocysteine recycling in diabetic retinopathy. Eye and Vision (London, England), 2020, 7, 4.	3.0	27
14	Retinopathy in a Diet-Induced Type 2 Diabetic Rat Model and Role of Epigenetic Modifications. Diabetes, 2020, 69, 689-698.	0.6	49
15	Epigenetics and Mitochondrial Stability in the Metabolic Memory Phenomenon Associated with Continued Progression of Diabetic Retinopathy. Scientific Reports, 2020, 10, 6655.	3.3	36
16	Hydrogen Sulfide: A Potential Therapeutic Target in the Development of Diabetic Retinopathy. , 2020, 61, 35.		16
17	Adaptor Protein p66Shc: A Link Between Cytosolic and Mitochondrial Dysfunction in the Development of Diabetic Retinopathy. Antioxidants and Redox Signaling, 2019, 30, 1621-1634.	5.4	37
18	Functional Regulation of an Oxidative Stress Mediator, Rac1, in Diabetic Retinopathy. Molecular Neurobiology, 2019, 56, 8643-8655.	4.0	28

#	Article	IF	Citations
19	The Regulatory Role of Rac1, a Small Molecular Weight GTPase, in the Development of Diabetic Retinopathy. Journal of Clinical Medicine, 2019, 8, 965.	2.4	21
20	Deciphering ocular diseases on an epigenetic platform. , 2019, , 117-138.		1
21	Epigenetic Modifications Compromise Mitochondrial DNA Quality Control in the Development of Diabetic Retinopathy. , 2019, 60, 3943.		27
22	Mitochondrial Stability in Diabetic Retinopathy: Lessons Learned From Epigenetics. Diabetes, 2019, 68, 241-247.	0.6	66
23	TXNIP mediates high glucose-induced mitophagic flux and lysosome enlargement in human retinal pigment epithelial cells. Biology Open, 2019, 8, .	1.2	33
24	Mitochondrial fusion and maintenance of mitochondrial homeostasis in diabetic retinopathy. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2019, 1865, 1617-1626.	3.8	67
25	Epigenetic Modifications in Peripheral Blood as Potential Noninvasive Biomarker of Diabetic Retinopathy. Translational Vision Science and Technology, 2019, 8, 43.	2.2	22
26	DNA Methylationâ€"a Potential Source of Mitochondria DNA Base Mismatch in the Development of Diabetic Retinopathy. Molecular Neurobiology, 2019, 56, 88-101.	4.0	43
27	Therapeutic targets for altering mitochondrial dysfunction associated with diabetic retinopathy. Expert Opinion on Therapeutic Targets, 2018, 22, 233-245.	3.4	37
28	Atypical antipsychotics, insulin resistance and weight; a meta-analysis of healthy volunteer studies. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2018, 83, 55-63.	4.8	52
29	Sirt1: A Guardian of the Development of Diabetic Retinopathy. Diabetes, 2018, 67, 745-754.	0.6	95
30	RACking up ceramide-induced islet Î²-cell dysfunction. Biochemical Pharmacology, 2018, 154, 161-169.	4.4	19
31	Epigenetics and Regulation of Oxidative Stress in Diabetic Retinopathy. , 2018, 59, 4831.		70
32	Epigenetics and Mitochondrial Stability in Diabetic Retinopathy. Diabetes, 2018, 67, .	0.6	1
33	Role of oxidative stress in epigenetic modification of MMP-9 promoter in the development of diabetic retinopathy. Graefe's Archive for Clinical and Experimental Ophthalmology, 2017, 255, 955-962.	1.9	35
34	Role of PARP-1 as a novel transcriptional regulator of MMP-9 in diabetic retinopathy. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2017, 1863, 1761-1769.	3.8	39
35	Epigenetic regulation of redox signaling in diabetic retinopathy: Role of Nrf2. Free Radical Biology and Medicine, 2017, 103, 155-164.	2.9	72
36	Diabetic retinopathy, metabolic memory and epigenetic modifications. Vision Research, 2017, 139, 30-38.	1.4	66

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37	Regulation of Matrix Metalloproteinase in the Pathogenesis of Diabetic Retinopathy. Progress in Molecular Biology and Translational Science, 2017, 148, 67-85.	1.7	56
38	Crosstalk Between Histone and DNA Methylation in Regulation of Retinal Matrix Metalloproteinase-9 in Diabetes. , 2017, 58, 6440.		50
39	Peripheral Blood Mitochondrial DNA Damage as a Potential Noninvasive Biomarker of Diabetic Retinopathy. , 2016, 57, 4035.		31
40	The Role of DNA Methylation in the Metabolic Memory Phenomenon Associated With the Continued Progression of Diabetic Retinopathy. , 2016, 57, 5748.		47
41	Diabetic retinopathy and transcriptional regulation of a small molecular weight G-Protein, Rac1. Experimental Eye Research, 2016, 147, 72-77.	2.6	30
42	Dynamic DNA methylation of matrix metalloproteinase-9 in the development of diabetic retinopathy. Laboratory Investigation, 2016, 96, 1040-1049.	3.7	85
43	Hyperlipidemia and the development of diabetic retinopathy: Comparison between type 1 and type 2 animal models. Metabolism: Clinical and Experimental, 2016, 65, 1570-1581.	3.4	56
44	Molecular Mechanism of Transcriptional Regulation of Matrix Metalloproteinase-9 in Diabetic Retinopathy. Journal of Cellular Physiology, 2016, 231, 1709-1718.	4.1	43
45	The Diabetes Visual Function Supplement Study (<i>DiVFuSS</i>). British Journal of Ophthalmology, 2016, 100, 227-234.	3.9	49
46	Epigenetic Modification of Mitochondrial DNA in the Development of Diabetic Retinopathy. , 2015, 56, 5133.		122
47	Lipotoxicity Augments Glucotoxicity-Induced Mitochondrial Damage in the Development of Diabetic Retinopathy. , 2015, 56, 2985.		64
48	Contribution of epigenetics in diabetic retinopathy. Science China Life Sciences, 2015, 58, 556-563.	4.9	41
49	Oxidative stress, mitochondrial damage and diabetic retinopathy. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2015, 1852, 2474-2483.	3.8	248
50	Oxidative stress and epigenetic modifications in the pathogenesis of diabetic retinopathy. Progress in Retinal and Eye Research, 2015, 48, 40-61.	15.5	245
51	Tiam1-Rac1 Axis Promotes Activation of p38 MAP Kinase in the Development of Diabetic Retinopathy: Evidence for a Requisite Role for Protein Palmitoylation. Cellular Physiology and Biochemistry, 2015, 36, 208-220.	1.6	45
52	Retinal Mitochondrial DNA Mismatch Repair in the Development of Diabetic Retinopathy, and Its Continued Progression After Termination of Hyperglycemia. Investigative Ophthalmology and Visual Science, 2014, 55, 6960-6967.	3.3	58
53	Epigenetic Modifications of Keap1 Regulate Its Interaction With the Protective Factor Nrf2 in the Development of Diabetic Retinopathy. , 2014, 55, 7256.		86
54	Sirt1, a Negative Regulator of Matrix Metalloproteinase-9 in Diabetic Retinopathy. , 2014, 55, 5653.		106

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55	Phagocyte-like NADPH oxidase [Nox2] in cellular dysfunction in models of glucolipotoxicity and diabetes. Biochemical Pharmacology, 2014, 88, 275-283.	4.4	66
56	TIAM1â€“RAC1 signalling axis-mediated activation of NADPH oxidase-2 initiates mitochondrial damage in the development of diabetic retinopathy. Diabetologia, 2014, 57, 1047-1056.	6.3	114
57	Epigenetic modifications of Nrf2-mediated glutamateâ€“cysteine ligase: implications for the development of diabetic retinopathy and the metabolic memory phenomenon associated with its continued progression. Free Radical Biology and Medicine, 2014, 75, 129-139.	2.9	76
58	Beneficial effects of the nutritional supplements on the development of diabetic retinopathy. Nutrition and Metabolism, 2014, 11, 8.	3.0	87
59	Posttranslational modification of mitochondrial transcription factor A in impaired mitochondria biogenesis: Implications in diabetic retinopathy and metabolic memory phenomenon. Experimental Eye Research, 2014, 121, 168-177.	2.6	48
60	Interrelationship between activation of matrix metalloproteinases and mitochondrial dysfunction in the development of diabetic retinopathy. Biochemical and Biophysical Research Communications, 2013, 438, 760-764.	2.1	41
61	Epigenetic Modification of<i>Sod2</i>in the Development of Diabetic Retinopathy and in the Metabolic Memory: Role of Histone Methylation. , 2013, 54, 244.		119
62	Impaired transport of mitochondrial transcription factor A (TFAM) and the metabolic memory phenomenon associated with the progression of diabetic retinopathy. Diabetes/Metabolism Research and Reviews, 2013, 29, 204-213.	4.0	36
63	Epigenetic Modifications and Diabetic Retinopathy. BioMed Research International, 2013, 2013, 1-9.	1.9	81
64	Regulation of Matrix Metalloproteinase-9 by Epigenetic Modifications and the Development of Diabetic Retinopathy. Diabetes, 2013, 62, 2559-2568.	0.6	116
65	Transcription Factor Nrf2-Mediated Antioxidant Defense System in the Development of Diabetic Retinopathy. , 2013, 54, 3941.		174
66	Mitochondria Damage in the Pathogenesis of Diabetic Retinopathy and in the Metabolic Memory Associated with its Continued Progression. Current Medicinal Chemistry, 2013, 20, 3226-3233.	2.4	57
67	A compensatory mechanism protects retinal mitochondria from initial insult in diabetic retinopathy. Free Radical Biology and Medicine, 2012, 53, 1729-1737.	2.9	77
68	Matrix metalloproteinases in diabetic retinopathy: potential role of MMP-9. Expert Opinion on Investigational Drugs, 2012, 21, 797-805.	4.1	140
69	Damaged Mitochondrial DNA Replication System and the Development of Diabetic Retinopathy. Antioxidants and Redox Signaling, 2012, 17, 492-504.	5.4	86
70	Mitochondria DNA Replication and DNA Methylation in the Metabolic Memory Associated with Continued Progression of Diabetic Retinopathy. , 2012, 53, 4881.		101
71	Diabetic retinopathy and signaling mechanism for activation of matrix metalloproteinaseâ€9. Journal of Cellular Physiology, 2012, 227, 1052-1061.	4.1	70
72	Epigenetic Changes in Mitochondrial Superoxide Dismutase in the Retina and the Development of Diabetic Retinopathy. Diabetes, 2011, 60, 1304-1313.	0.6	185

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73	Beyond AREDS: Is There a Place for Antioxidant Therapy in the Prevention/Treatment of Eye Disease?. , 2011, 52, 8665.		45
74	Role of Mitochondria Biogenesis in the Metabolic Memory Associated with the Continued Progression of Diabetic Retinopathy and Its Regulation by Lipoic Acid. , 2011, 52, 8791.		75
75	Novel Role of Mitochondrial Matrix Metalloproteinase-2 in the Development of Diabetic Retinopathy. , 2011, 52, 3832.		76
76	Diabetic Retinopathy, Superoxide Damage and Antioxidants. Current Pharmaceutical Biotechnology, 2011, 12, 352-361.	1.6	86
77	Mitochondrial biogenesis and the development of diabetic retinopathy. Free Radical Biology and Medicine, 2011, 51, 1849-1860.	2.9	122
78	Abrogation of <i>MMP-9</i> Gene Protects Against the Development of Retinopathy in Diabetic Mice by Preventing Mitochondrial Damage. Diabetes, 2011, 60, 3023-3033.	0.6	131
79	Interleukin-1Î² and mitochondria damage, and the development of diabetic retinopathy. Journal of Ocular Biology, Diseases, and Informatics, 2011, 4, 3-9.	0.2	22
80	Increased Phagocyte-Like NADPH Oxidase and ROS Generation in Type 2 Diabetic ZDF Rat and Human Islets. Diabetes, 2011, 60, 2843-2852.	0.6	102
81	The role of Raf-1 kinase in diabetic retinopathy. Expert Opinion on Therapeutic Targets, 2011, 15, 357-364.	3.4	14
82	Diabetic Retinopathy and Damage to Mitochondrial Structure and Transport Machinery. , 2011, 52, 8739.		89
83	Resistance of retinal inflammatory mediators to suppress after reinstitution of good glycemic control: novel mechanism for metabolic memory. Journal of Diabetes and Its Complications, 2010, 24, 55-63.	2.3	73
84	Role of histone acetylation in the development of diabetic retinopathy and the metabolic memory phenomenon. Journal of Cellular Biochemistry, 2010, 110, 1306-1313.	2.6	144
85	Matrix metalloproteinase-2 in the development of diabetic retinopathy and mitochondrial dysfunction. Laboratory Investigation, 2010, 90, 1365-1372.	3.7	85
86	Glyceraldehyde-3-Phosphate Dehydrogenase in Retinal Microvasculature: Implications for the Development and Progression of Diabetic Retinopathy. , 2010, 51, 1765.		37
87	Role of Mitochondrial DNA Damage in the Development of Diabetic Retinopathy, and the Metabolic Memory Phenomenon Associated with Its Progression. Antioxidants and Redox Signaling, 2010, 13, 797-805.	5.4	152
88	Role of Matrix Metalloproteinase-9 in the Development of Diabetic Retinopathy and Its Regulation by H-Ras. , 2010, 51, 4320.		85
89	Metabolic memory in diabetes â€“ from in vitro oddity to in vivo problem: Role of Apoptosis. Brain Research Bulletin, 2010, 81, 297-302.	3.0	49
90	Metabolic memory and diabetic retinopathy: Role of inflammatory mediators in retinal pericytes. Experimental Eye Research, 2010, 90, 617-623.	2.6	67

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91	Oxidative damage of mitochondrial DNA in diabetes and its protection by manganese superoxide dismutase. Free Radical Research, 2010, 44, 313-321.	3.3	129
92	Role of Glyceraldehyde 3-Phosphate Dehydrogenase in the Development and Progression of Diabetic Retinopathy. Diabetes, 2009, 58, 227-234.	0.6	93
93	Oxidative stress and the development of diabetic retinopathy: Contributory role of matrix metalloproteinase-2. Free Radical Biology and Medicine, 2009, 46, 1677-1685.	2.9	91
94	Translocation of H-Ras and its implications in the development of diabetic retinopathy. Biochemical and Biophysical Research Communications, 2009, 387, 461-466.	2.1	19
95	Oxidative stress and diabetic retinopathy: Pathophysiological mechanisms and treatment perspectives. Reviews in Endocrine and Metabolic Disorders, 2008, 9, 315-327.	5.7	253
96	Diabetes regulates small molecular weight G-protein, H-Ras, in the microvasculature of the retina: Implication in the development of retinopathy. Microvascular Research, 2008, 76, 189-193.	2.5	16
97	Beneficial Effect of Zeaxanthin on Retinal Metabolic Abnormalities in Diabetic Rats. , 2008, 49, 1645.		125
98	Inhibition of Retinopathy and Retinal Metabolic Abnormalities in Diabetic Rats With AREDS-Based Micronutrients. JAMA Ophthalmology, 2008, 126, 1266.	2.4	69
99	Capillary Dropout in Diabetic Retinopathy. , 2008, , 265-282.		7
100	Role of raf-1 kinase in diabetes-induced accelerated apoptosis of retinal capillary cells. International Journal of Biomedical Science, 2008, 4, 20-8.	0.1	4
101	Metabolic Memory Phenomenon and Accumulation of Peroxynitrite in Retinal Capillaries. Experimental Diabetes Research, 2007, 2007, 1-7.	3.8	93
102	Role of retinal mitochondria in the development of diabetic retinopathy. Expert Review of Ophthalmology, 2007, 2, 237-247.	0.6	2
103	Oxidative Damage in the Retinal Mitochondria of Diabetic Mice: Possible Protection by Superoxide Dismutase. , 2007, 48, 3805.		286
104	Oxidative Stress and Diabetic Retinopathy. Experimental Diabetes Research, 2007, 2007, 1-12.	3.8	506
105	Effects of curcumin on retinal oxidative stress and inflammation in diabetes. Nutrition and Metabolism, 2007, 4, 8.	3.0	278
106	Hexosamine induction of oxidative stress, hypertrophy and laminin expression in renal mesangial cells: effect of the anti-oxidant Î±-lipoic acid. Cell Biochemistry and Function, 2007, 25, 537-550.	2.9	35
107	Small molecular weight G-protein, H-Ras, and retinal endothelial cell apoptosis in diabetes. Molecular and Cellular Biochemistry, 2007, 296, 69-76.	3.1	26
108	Increased oxidative stress in diabetes regulates activation of a small molecular weight G-protein, H-Ras, in the retina. Molecular Vision, 2007, 13, 602-10.	1.1	29

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109	Overexpression of mitochondrial superoxide dismutase in mice protects the retina from diabetes-induced oxidative stress. Free Radical Biology and Medicine, 2006, 41, 1191-1196.	2.9	203
110	Role of Mitochondrial Superoxide Dismutase in the Development of Diabetic Retinopathy. , 2006, 47, 1594.		163
111	Diabetic Retinopathy: Mitochondrial Dysfunction and Retinal Capillary Cell Death. Antioxidants and Redox Signaling, 2005, 7, 1581.	5.4	218
112	Effect of advanced glycation end products on accelerated apoptosis of retinal capillary cells under in vitro conditions. Life Sciences, 2005, 76, 1051-1060.	4.3	66
113	Effect of PKCÎ² on Retinal Oxygenation Response in Experimental Diabetes. , 2004, 45, 937.		18
114	Potential Contributory Role of H-Ras, a Small G-Protein, in the Development of Retinopathy in Diabetic Rats. Diabetes, 2004, 53, 775-783.	0.6	48
115	Effect of Long-Term Administration of Î±-Lipoic Acid on Retinal Capillary Cell Death and the Development of Retinopathy in Diabetic Rats. Diabetes, 2004, 53, 3233-3238.	0.6	223
116	Role of interleukin-1Â in the pathogenesis of diabetic retinopathy. British Journal of Ophthalmology, 2004, 88, 1343-1347.	3.9	210
117	Reversal of hyperglycemia and diabetic nephropathy. Journal of Diabetes and Its Complications, 2004, 18, 282-288.	2.3	87
118	Re-institution of good metabolic control in diabetic rats and activation of caspase-3 and nuclear transcriptional factor (NF-kB) in the retina. Acta Diabetologica, 2004, 41, 194-199.	2.5	84
119	Role of Interleukin-1Î² in the Development of Retinopathy in Rats: Effect of Antioxidants. , 2004, 45, 4161.		152
120	Effect of Reinstitution of Good Glycemic Control on Retinal Oxidative Stress and Nitrative Stress in Diabetic Rats. Diabetes, 2003, 52, 818-823.	0.6	252
121	Diabetes-induced Activation of Nuclear Transcriptional Factor in the Retina, and its Inhibition by Antioxidants. Free Radical Research, 2003, 37, 1169-1180.	3.3	242
122	Diabetes-Induced Mitochondrial Dysfunction in the Retina. , 2003, 44, 5327.		261
123	Retinal metabolic abnormalities in diabetic mouse: Comparison with diabetic rat. Current Eye Research, 2002, 24, 123-128.	1.5	31
124	Diabetes-induced Activation of Caspase-3 in Retina: Effect of Antioxidant Therapy. Free Radical Research, 2002, 36, 993-999.	3.3	134
125	Termination of experimental galactosemia in rats, and progression of retinal metabolic abnormalities. Investigative Ophthalmology and Visual Science, 2002, 43, 3287-91.	3.3	15
126	Retinal glutamate in diabetes and effect of antioxidants. Neurochemistry International, 2001, 38, 385-390.	3.8	187

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127	Therapeutic potential of anti-oxidants and diabetic retinopathy. Expert Opinion on Investigational Drugs, 2001, 10, 1665-1676.	4.1	81
128	Abnormalities of retinal metabolism in diabetes or experimental galactosemia VIII. Prevention by aminoguanidine. Current Eye Research, 2000, 21, 814-819.	1.5	79
129	Diabetes-induced metabolic abnormalities in myocardium: Effect of antioxidant therapy. Free Radical Research, 2000, 32, 67-74.	3.3	59
130	Abnormalities of retinal metabolism in diabetes or experimental galactosemia. VI. Comparison of retinal and cerebral cortex metabolism, and effects of antioxidant therapy. Free Radical Biology and Medicine, 1999, 26, 371-378.	2.9	44
131	Abnormalities of Retinal Metabolism in Diabetes or Experimental Galactosemia. IV. Antioxidant Defense System. Free Radical Biology and Medicine, 1997, 22, 587-592.	2.9	160
132	Abnormalities of retinal metabolism in diabetes or galactosemia II. Comparison of Î³-glutamyl transpeptidase in retina and cerebral cortex, and effects of antioxidant therapy. Current Eye Research, 1994, 13, 891-896.	1.5	74