Naila Rabbani

List of Publications by Year
in descending order

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119 papers	8,401 citations	38660 50 h-index	46693 89 g-index
126 all docs	126 docs citations	126 times ranked	8125 citing authors

#	Article	IF	Citations
1	Tissue-specific glucose toxicity induces mitochondrial damage in a burn injury model of critical illness. Critical Care Medicine, 2009, 37, 1355-1364.	0.4	593
2	Methylglyoxal modification of Nav1.8 facilitates nociceptive neuron firing and causes hyperalgesia in diabetic neuropathy. Nature Medicine, 2012, 18, 926-933.	15.2	414
3	Methylglyoxal, glyoxalase 1 and the dicarbonyl proteome. Amino Acids, 2012, 42, 1133-1142.	1.2	345
4	Dicarbonyl stress in cell and tissue dysfunction contributing to ageing and disease. Biochemical and Biophysical Research Communications, 2015, 458, 221-226.	1.0	269
5	Transcriptional control of glyoxalase 1 by Nrf2 provides a stress-responsive defence against dicarbonyl glycation. Biochemical Journal, 2012, 443, 213-222.	1.7	251
6	C. elegans as Model for the Study of High Glucoseâ€“ Mediated Life Span Reduction. Diabetes, 2009, 58, 2450-2456.	0.3	248
7	Advanced glycation end products in the pathogenesis of chronic kidney disease. Kidney International, 2018, 93, 803-813.	2.6	239
8	High prevalence of low plasma thiamine concentration in diabetes linked to a marker of vascular disease. Diabetologia, 2007, 50, 2164-2170.	2.9	223
9	Activation of NF-E2â€“Related Factor-2 Reverses Biochemical Dysfunction of Endothelial Cells Induced by Hyperglycemia Linked to Vascular Disease. Diabetes, 2008, 57, 2809-2817.	0.3	214
10	Glyoxalase in diabetes, obesity and related disorders. Seminars in Cell and Developmental Biology, 2011, 22, 309-317.	2.3	205
11	Measurement of methylglyoxal by stable isotopic dilution analysis LC-MS/MS with corroborative prediction in physiological samples. Nature Protocols, 2014, 9, 1969-1979.	5.5	198
12	High Glucose Increases Angiopoietin-2 Transcription in Microvascular Endothelial Cells through Methylglyoxal Modification of mSin3A. Journal of Biological Chemistry, 2007, 282, 31038-31045.	1.6	195
13	Involvement of a gutâ€“retina axis in protection against dietary glycemia-induced age-related macular degeneration. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4472-E4481.	3.3	179
14	Improved Glycemic Control and Vascular Function in Overweight and Obese Subjects by Glyoxalase 1 Inducer Formulation. Diabetes, 2016, 65, 2282-2294.	0.3	170
15	Advanced Glycation End Products in Extracellular Matrix Proteins Contribute to the Failure of Sensory Nerve Regeneration in Diabetes. Diabetes, 2009, 58, 2893-2903.	0.3	155
16	Glyoxalase in ageing. Seminars in Cell and Developmental Biology, 2011, 22, 293-301.	2.3	154
17	Dicarbonyls linked to damage in the powerhouse: glycation of mitochondrial proteins and oxidative stress. Biochemical Society Transactions, 2008, 36, 1045-1050.	1.6	149
18	High-dose thiamine therapy for patients with type 2 diabetes and microalbuminuria: a randomised, double-blind placebo-controlled pilot study. Diabetologia, 2009, 52, 208-212.	2.9	145

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19	Glyoxalase in tumourigenesis and multidrug resistance. Seminars in Cell and Developmental Biology, 2011, 22, 318-325.	2.3	142
20	Glycation of LDL by Methylglyoxal Increases Arterial Atherogenicity. Diabetes, 2011, 60, 1973-1980.	0.3	140
21	Dicarbonyls and glyoxalase in disease mechanisms and clinical therapeutics. Glycoconjugate Journal, 2016, 33, 513-525.	1.4	130
22	Methylglyoxal-induced dicarbonyl stress in aging and disease: first steps towards glyoxalase 1-based treatments. Clinical Science, 2016, 130, 1677-1696.	1.8	124
23	Increased protein damage in renal glomeruli, retina, nerve, plasma and urine and its prevention by thiamine and benfotiamine therapy in a rat model of diabetes. Diabetologia, 2010, 53, 1506-1516.	2.9	120
24	The Critical Role of Methylglyoxal and Glyoxalase 1 in Diabetic Nephropathy. Diabetes, 2014, 63, 50-52.	0.3	120
25	Detection of oxidized and glycated proteins in clinical samples using mass spectrometry â€" A user's perspective. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 818-829.	1.1	117
26	Glycation research in amino acids: a place to call home. Amino Acids, 2012, 42, 1087-1096.	1.2	113
27	Dicarbonyl proteome and genome damage in metabolic and vascular disease. Biochemical Society Transactions, 2014, 42, 425-432.	1.6	112
28	Increased Glycation and Oxidative Damage to Apolipoprotein B100 of LDL Cholesterol in Patients With Type 2 Diabetes and Effect of Metformin. Diabetes, 2010, 59, 1038-1045.	0.3	109
29	Imidazopurinones are markers of physiological genomic damage linked to DNA instability and glyoxalase 1-associated tumour multidrug resistance. Nucleic Acids Research, 2010, 38, 5432-5442.	6.5	98
30	Measurement of glyoxalase activities. Biochemical Society Transactions, 2014, 42, 491-494.	1.6	88
31	Activity, regulation, copy number and function in the glyoxalase system. Biochemical Society Transactions, 2014, 42, 419-424.	1.6	83
32	Diabetes is associated with posttranslational modifications in plasminogen resulting in reduced plasmin generation and enzyme-specific activity. Blood, 2013, 122, 134-142.	0.6	79
33	The Dicarbonyl Proteome. Annals of the New York Academy of Sciences, 2008, 1126, 124-127.	1.8	75
34	Accumulation of free adduct glycation, oxidation, and nitration products follows acute loss of renal function. Kidney International, 2007, 72, 1113-1121.	2.6	74
35	Alpha-synuclein deficiency leads to increased glyoxalase I expression and glycation stress. Cellular and Molecular Life Sciences, 2011, 68, 721-733.	2.4	73
36	Mass spectrometric determination of early and advanced glycation in biology. Glycoconjugate Journal, 2016, 33, 553-568.	1.4	72

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37	Quantitative measurement of specific biomarkers for protein oxidation, nitration and glycation in Arabidopsis leaves. Plant Journal, 2009, 59, 661-671.	2.8	71
38	Activation of the unfolded protein response in high glucose treated endothelial cells is mediated by methylglyoxal. Scientific Reports, 2019, 9, 7889.	1.6	69
39	Assay of methylglyoxal-derived protein and nucleotide AGEs. Biochemical Society Transactions, 2014, 42, 511-517.	1.6	67
40	Hyperglycemic kidney damage in an animal model of prolonged critical illness. Kidney International, 2009, 76, 512-520.	2.6	66
41	Frequency Modulated Translocational Oscillations of Nrf2 Mediate the Antioxidant Response Element Cytoprotective Transcriptional Response. Antioxidants and Redox Signaling, 2015, 23, 613-629.	2.5	63
42	PROGRESS IN UREMIC TOXIN RESEARCH: Highlights and Hotspots of Protein Glycation in Endâ€Stage Renal Disease. Seminars in Dialysis, 2009, 22, 400-404.	0.7	62
43	Glyoxalase 1 Modulation in Obesity and Diabetes. Antioxidants and Redox Signaling, 2019, 30, 354-374.	2.5	62
44	Dicarbonyl stress in clinical obesity. Glycoconjugate Journal, 2016, 33, 581-589.	1.4	60
45	Advanced glycation endproducts, dityrosine and arginine transporter dysfunction in autism - a source of biomarkers for clinical diagnosis. Molecular Autism, 2018, 9, 3.	2.6	58
46	Multiple roles of glyoxalase 1-mediated suppression of methylglyoxal glycation in cancer biologyâ€"Involvement in tumour suppression, tumour growth, multidrug resistance and target for chemotherapy. Seminars in Cancer Biology, 2018, 49, 83-93.	4.3	58
47	Arginine-directed glycation and decreased HDL plasma concentration and functionality. Nutrition and Diabetes, 2014, 4, e134-e134.	1.5	57
48	Protein oxidation, nitration and glycation biomarkers for early-stage diagnosis of osteoarthritis of the knee and typing and progression of arthritic disease. Arthritis Research and Therapy, 2016, 18, 250.	1.6	54
49	Aging-Dependent Reduction in Glyoxalase 1 Delays Wound Healing. Gerontology, 2013, 59, 427-437.	1.4	53
50	Hexokinase-2 Glycolytic Overload in Diabetes and Ischemiaâ€"Reperfusion Injury. Trends in Endocrinology and Metabolism, 2019, 30, 419-431.	3.1	53
51	Emerging role of thiamine therapy for prevention and treatment of early-stage diabetic nephropathy. Diabetes, Obesity and Metabolism, 2011, 13, 577-583.	2.2	52
52	Biomarkers of early stage osteoarthritis, rheumatoid arthritis and musculoskeletal health. Scientific Reports, 2015, 5, 9259.	1.6	47
53	Serum Levels of Advanced Glycation Endproducts and Other Markers of Protein Damage in Early Diabetic Nephropathy in Type 1 Diabetes. PLoS ONE, 2012, 7, e35655.	1.1	46
54	Reversal of Hyperglycemiaâ€Induced Angiogenesis Deficit of Human Endothelial Cells by Overexpression of Glyoxalase 1<scp>In Vitro</scp>. Annals of the New York Academy of Sciences, 2008, 1126, 262-264.	1.8	44

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55	Protein glycation â€“ biomarkers of metabolic dysfunction and early-stage decline in health in the era of precision medicine. Redox Biology, 2021, 42, 101920.	3.9	44
56	Glucose-Induced Down Regulation of Thiamine Transporters in the Kidney Proximal Tubular Epithelium Produces Thiamine Insufficiency in Diabetes. PLoS ONE, 2012, 7, e53175.	1.1	43
57	Glyoxalase 1-knockdown in human aortic endothelial cells â€“ effect on the proteome and endothelial function estimates. Scientific Reports, 2016, 6, 37737.	1.6	39
58	Increased DNA Dicarbonyl Glycation and Oxidation Markers in Patients with Type 2 Diabetes and Link to Diabetic Nephropathy. Journal of Diabetes Research, 2015, 2015, 1-10.	1.0	37
59	Reversal of Insulin Resistance in Overweight and Obese Subjects by trans-Resveratrol and Hesperetin Combinationâ€”Link to Dysglycemia, Blood Pressure, Dyslipidemia, and Low-Grade Inflammation. Nutrients, 2021, 13, 2374.	1.7	37
60	Glyoxalase II does not support methylglyoxal detoxification but serves as a general trypanothione thioesterase in African trypanosomes. Molecular and Biochemical Parasitology, 2009, 163, 19-27.	0.5	36
61	Differential effects of glyoxalase 1 overexpression on diabetic atherosclerosis and renal dysfunction in streptozotocin-treated, apolipoprotein E-deficient mice. Physiological Reports, 2014, 2, e12043.	0.7	35
62	Possible role of methylglyoxal and glyoxalase in arthritis. Biochemical Society Transactions, 2014, 42, 538-542.	1.6	35
63	The uremic toxin oxythiamine causes functional thiamine deficiency in end-stage renal disease by inhibiting transketolase activity. Kidney International, 2016, 90, 396-403.	2.6	35
64	Protein damage in diabetes and uremiaâ€”identifying hotspots of proteome damage where minimal modification is amplified to marked pathophysiological effect. Free Radical Research, 2011, 45, 89-100.	1.5	32
65	Dicarbonyl stress, protein glycation and the unfolded protein response. Glycoconjugate Journal, 2021, 38, 331-340.	1.4	32
66	Glyoxalase Centennial conference: introduction, history of research on the glyoxalase system and future prospects. Biochemical Society Transactions, 2014, 42, 413-418.	1.6	31
67	Quantitation of plasma thiamine, related metabolites and plasma protein oxidative damage markers in children with autism spectrum disorder and healthy controls. Free Radical Research, 2016, 50, S85-S90.	1.5	30
68	Assay of 3â€Nitrotyrosine in Tissues and Body Fluids by Liquid Chromatography with Tandem Mass Spectrometric Detection. Methods in Enzymology, 2008, 440, 337-359.	0.4	28
69	Studies of advanced glycation end products and oxidation biomarkers for type 2 diabetes. BioFactors, 2018, 44, 281-288.	2.6	27
70	Sulforaphane Delays Fibroblast Senescence by Curbing Cellular Glucose Uptake, Increased Glycolysis, and Oxidative Damage. Oxidative Medicine and Cellular Longevity, 2018, 2018, 1-16.	1.9	27
71	Reappraisal of putative glyoxalase 1-deficient mouse and dicarbonyl stress on embryonic stem cellsin vitro. Biochemical Journal, 2016, 473, 4255-4270.	1.7	26
72	Assay of methylglyoxal and glyoxal and control of peroxidase interference. Biochemical Society Transactions, 2014, 42, 504-510.	1.6	24

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73	Disturbance of B-vitamin status in people with type 2 diabetes in Indonesiaâ€"Link to renal status, glycemic control and vascular inflammation. Diabetes Research and Clinical Practice, 2012, 95, 415-424.	1.1	23
74	Intracellular Accumulation of Methylglyoxal by Glyoxalase 1 Knock Down Alters Collagen Homoeostasis in L6 Myoblasts. International Journal of Molecular Sciences, 2017, 18, 480.	1.8	23
75	Vulnerabilities of the SARS-CoV-2 Virus to Proteotoxicityâ€"Opportunity for Repurposed Chemotherapy of COVID-19 Infection. Frontiers in Pharmacology, 2020, 11, 585408.	1.6	23
76	Protein Glycation in Plantsâ€"An Under-Researched Field with Much Still to Discover. International Journal of Molecular Sciences, 2020, 21, 3942.	1.8	23
77	A low glycemic diet protects disease-prone Nrf2-deficient mice against age-related macular degeneration. Free Radical Biology and Medicine, 2020, 150, 75-86.	1.3	23
78	Effect of Irbesartan treatment on plasma and urinary markers of protein damage in patients with type 2 diabetes and microalbuminuria. Amino Acids, 2012, 42, 1627-1639.	1.2	22
79	Hexokinase-2-Linked Glycolytic Overload and Unscheduled Glycolysisâ€"Driver of Insulin Resistance and Development of Vascular Complications of Diabetes. International Journal of Molecular Sciences, 2022, 23, 2165.	1.8	22
80	A fluorogenic assay for methylglyoxal. Biochemical Society Transactions, 2014, 42, 548-555.	1.6	21
81	Proteomic identification and characterization of hepatic glyoxalase 1 dysregulation in non-alcoholic fatty liver disease. Proteome Science, 2018, 16, 4.	0.7	20
82	Vitamin B6, B9 and B12 in diabetic nephropathyâ€"beware. Nature Reviews Endocrinology, 2010, 6, 477-478.	4.3	19
83	Glycolytic overload-driven dysfunction of periodontal ligament fibroblasts in high glucose concentration, corrected by glyoxalase 1 inducer. BMJ Open Diabetes Research and Care, 2020, 8, e001458.	1.2	19
84	Reading patterns of proteome damage by glycation, oxidation and nitration: quantitation by stable isotopic dilution analysis LC-MS/MS. Essays in Biochemistry, 2020, 64, 169-183.	2.1	19
85	Quantitation of Markers of Protein Damage by Glycation, Oxidation, and Nitration in Peritoneal Dialysis. Peritoneal Dialysis International, 2009, 29, 51-56.	1.1	18
86	Copy number variation of glyoxalase I. Biochemical Society Transactions, 2014, 42, 500-503.	1.6	18
87	Urinary Metabolomic Markers of Protein Glycation, Oxidation, and Nitration in Early-Stage Decline in Metabolic, Vascular, and Renal Health. Oxidative Medicine and Cellular Longevity, 2019, 2019, 1-15.	1.9	18
88	Emerging Glycation-Based Therapeuticsâ€"Glyoxalase 1 Inducers and Glyoxalase 1 Inhibitors. International Journal of Molecular Sciences, 2022, 23, 2453.	1.8	18
89	Hidden Complexities in the Measurement of Fructosyl-Lysine and Advanced Glycation End Products for Risk Prediction of Vascular Complications of Diabetes. Diabetes, 2015, 64, 9-11.	0.3	17
90	Frequency modulated translocational oscillations of Nrf2, a transcription factor functioning like a wireless sensor. Biochemical Society Transactions, 2015, 43, 669-673.	1.6	15

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91	Glycation marker glucosepane increases with the progression of osteoarthritis and correlates with morphological and functional changes of cartilage in vivo. Arthritis Research and Therapy, 2018, 20, 131.	1.6	15
92	Dietary and Synthetic Activators of the Antistress Gene Response in Treatment of Renal Disease. , 2012, 22, 195-202.		12
93	The glyoxalase systemâ€"From microbial metabolism, through ageing to human disease and multidrug resistance. Seminars in Cell and Developmental Biology, 2011, 22, 261.	2.3	11
94	Determination of Types and Binding Sites of Advanced Glycation End Products for Substance P. Analytical Chemistry, 2012, 84, 10568-10575.	3.2	10
95	Measurement of glyoxalase gene expression. Biochemical Society Transactions, 2014, 42, 495-499.	1.6	10
96	High fractional excretion of glycation adducts is associated with subsequent early decline in renal function in type 1 diabetes. Scientific Reports, 2020, 10, 12709.	1.6	10
97	Potential Markers of Dietary Glycemic Exposures for Sustained Dietary Interventions in Populations without Diabetes. Advances in Nutrition, 2020, 11, 1221-1236.	2.9	10
98	Studies of Glyoxalase 1-Linked Multidrug Resistance Reveal Glycolysis-Derived Reactive Metabolite, Methylglyoxal, Is a Common Contributor in Cancer Chemotherapy Targeting the Spliceosome. Frontiers in Oncology, 2021, 11, 748698.	1.3	10
99	Methylglyoxal and glyoxalase 1â€"a metabolic stress pathway-linking hyperglycemia to the unfolded protein response and vascular complications of diabetes. Clinical Science, 2022, 136, 819-824.	1.8	10
100	Study of an Unusual Advanced Glycation End-Product (AGE) Derived from Glyoxal Using Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2014, 25, 673-683.	1.2	9
101	Oxygen restriction as challenge test reveals early high-fat-diet-induced changes in glucose and lipid metabolism. Pflugers Archiv European Journal of Physiology, 2015, 467, 1179-1193.	1.3	8
102	Relation of the protein glycation, oxidation and nitration to the osteocalcin level in obese subjects. Acta Biochimica Polonica, 2017, 64, 415-422.	0.3	8
103	Preparation of Nucleotide Advanced Glycation Endproducts-Imidazopurinone Adducts Formed by Glycation of Deoxyguanosine with Glyoxal and Methylglyoxal. Annals of the New York Academy of Sciences, 2008, 1126, 280-282.	1.8	7
104	Dicarbonyl stress and the glyoxalase system. , 2020, , 759-777.		7
105	Thiamine in diabetic nephropathy: a novel treatment modality? Reply to Alkhalaf A, Kleefstra N, Groenier KH et al. [letter]. Diabetologia, 2009, 52, 1214-1216.	2.9	6
106	Glyoxalase 1 copy number variation in patients with well differentiated gastro-entero-pancreatic neuroendocrine tumours (GEP-NET). Oncotarget, 2017, 8, 76961-76973.	0.8	5
107	Methylglyoxal modification of LDL: proatherogenicity without oxidation opens new paths to prevent cardiovascular disease. Clinical Lipidology, 2011, 6, 631-634.	0.4	3
108	Severe thiamine deficiency complicated by weight loss protects against renal ischaemia-reperfusion injury in rats. CKJ: Clinical Kidney Journal, 2009, 2, 182-183.	1.4	2

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109	Amino Acids Glycation Section. Amino Acids, 2012, 42, 1085-1086.	1.2	2
110	Special edition of Amino Acids of selected papers from the eleventh international symposium on the Maillard reaction, September 16â€“20, 2012. Amino Acids, 2014, 46, 259-259.	1.2	2
111	Quantitation of markers of protein damage by glycation, oxidation, and nitration in peritoneal dialysis. Peritoneal Dialysis International, 2009, 29 Suppl 2, S51-6.	1.1	2
112	New development in a blood-based diagnostic test for early-stage arthritis. Biomarkers in Medicine, 2015, 9, 943-945.	0.6	1
113	Glycation- and/or Polyol Pathway-Inducing Complications. , 2018, , 170-179.		1
114	186-OR: Risk Prediction of Early Decline in Renal Function in Diabetic Kidney Disease with Algorithm Including Fractional Excretion of Glycated Amino Acids. Diabetes, 2021, 70, 186-OR.	0.3	1
115	AGEomics Biomarkers and Machine Learningâ€"Realizing the Potential of Protein Glycation in Clinical Diagnostics. International Journal of Molecular Sciences, 2022, 23, 4584.	1.8	1
116	Factors influencing the development and effectiveness of biomarkers in rheumatoid arthritis and osteoarthritis. International Journal of Clinical Rheumatology, 2015, 10, 313-316.	0.3	0
117	192.â€ƒINCREASED PROTEIN GLYCATION, OXIDATION AND NITRATION WITH INCREASING SEVERITY OF RHEUMATOID ARTHRITIS IN A CROSS-SECTIONAL STUDY ASSESSED BY ROBUST STABLE ISOTOPIC DILUTION ANALYSIS QUANTITATION. Rheumatology, 2017, 56, .	0.9	0
118	Thiamine in Diabetic Renal Disease: Dietary Insufficiency, Renal Washout, Antistress Gene Response, Therapeutic Supplements, Risk Predictor, and Link to Genetic Susceptibility. , 2011, , 93-104.		0
119	Antiviral activity of glucose-derived reactive metabolite, methylglyoxal against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Journal of Emergency Medicine, Trauma and Acute Care, 2022, 2022, .	0.1	0