

# Hideo Kimura

## List of Publications by Year in descending order

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84  
papers

14,889  
citations

29994

54  
h-index

74018

75  
g-index

89  
all docs

89  
docs citations

89  
times ranked

8191  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Possible Role of Hydrogen Sulfide as an Endogenous Smooth Muscle Relaxant in Synergy with Nitric Oxide. <i>Biochemical and Biophysical Research Communications</i> , 1997, 237, 527-531.	1.0	1,104
2	Hydrogen sulfide attenuates myocardial ischemia-reperfusion injury by preservation of mitochondrial function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 15560-15565.	3.3	996
3	3-Mercaptopyruvate Sulfurtransferase Produces Hydrogen Sulfide and Bound Sulfane Sulfur in the Brain. <i>Antioxidants and Redox Signaling</i> , 2009, 11, 703-714.	2.5	800
4	Hydrogen sulfide protects neurons from oxidative stress. <i>FASEB Journal</i> , 2004, 18, 1165-1167.	0.2	766
5	Brain hydrogen sulfide is severely decreased in Alzheimer's disease. <i>Biochemical and Biophysical Research Communications</i> , 2002, 293, 1485-1488.	1.0	739
6	Development of a Highly Selective Fluorescence Probe for Hydrogen Sulfide. <i>Journal of the American Chemical Society</i> , 2011, 133, 18003-18005.	6.6	614
7	Hydrogen Sulfide Increases Glutathione Production and Suppresses Oxidative Stress in Mitochondria. <i>Antioxidants and Redox Signaling</i> , 2010, 12, 1-13.	2.5	579
8	Hydrogen sulfide: its production, release and functions. <i>Amino Acids</i> , 2011, 41, 113-121.	1.2	547
9	A novel pathway for the production of hydrogen sulfide from D-cysteine in mammalian cells. <i>Nature Communications</i> , 2013, 4, 1366.	5.8	449
10	A Source of Hydrogen Sulfide and a Mechanism of Its Release in the Brain. <i>Antioxidants and Redox Signaling</i> , 2009, 11, 205-214.	2.5	444
11	Vascular Endothelium Expresses 3-Mercaptopyruvate Sulfurtransferase and Produces Hydrogen Sulfide. <i>Journal of Biochemistry</i> , 2009, 146, 623-626.	0.9	410
12	Hydrogen Sulfide as a Neuromodulator. <i>Molecular Neurobiology</i> , 2002, 26, 013-020.	1.9	374
13	Hydrogen Sulfide Induces Cyclic AMP and Modulates the NMDA Receptor. <i>Biochemical and Biophysical Research Communications</i> , 2000, 267, 129-133.	1.0	308
14	Polysulfides are possible H <sub>2</sub> S-derived signaling molecules in rat brain. <i>FASEB Journal</i> , 2013, 27, 2451-2457.	0.2	299
15	Hydrogen sulfide induces calcium waves in astrocytes. <i>FASEB Journal</i> , 2004, 18, 557-559.	0.2	292
16	Hydrogen Sulfide: From Brain to Gut. <i>Antioxidants and Redox Signaling</i> , 2010, 12, 1111-1123.	2.5	287
17	Hydrogen Sulfide Protects HT22 Neuronal Cells from Oxidative Stress. <i>Antioxidants and Redox Signaling</i> , 2006, 8, 661-670.	2.5	275
18	Signaling Molecules: Hydrogen Sulfide and Polysulfide. <i>Antioxidants and Redox Signaling</i> , 2015, 22, 362-376.	2.5	272

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19	Production and Physiological Effects of Hydrogen Sulfide. <i>Antioxidants and Redox Signaling</i> , 2014, 20, 783-793.	2.5	270
20	L-Cysteine Inhibits Insulin Release From the Pancreatic $\beta$ -Cell: Possible Involvement of Metabolic Production of Hydrogen Sulfide, a Novel Gasotransmitter. <i>Diabetes</i> , 2006, 55, 1391-1397.	0.3	269
21	Murine cystathionine $\beta$ -lyase: complete cDNA and genomic sequences, promoter activity, tissue distribution and developmental expression. <i>Biochemical Journal</i> , 2004, 381, 113-123.	1.7	257
22	Hydrogen Sulfide Is a Signaling Molecule and a Cytoprotectant. <i>Antioxidants and Redox Signaling</i> , 2012, 17, 45-57.	2.5	254
23	Thioredoxin and dihydrolipoic acid are required for 3-mercaptopyruvate sulfurtransferase to produce hydrogen sulfide. <i>Biochemical Journal</i> , 2011, 439, 479-485.	1.7	252
24	The physiological role of hydrogen sulfide and beyond. <i>Nitric Oxide - Biology and Chemistry</i> , 2014, 41, 4-10.	1.2	241
25	Physiological role of hydrogen sulfide and polysulfide in the central nervous system. <i>Neurochemistry International</i> , 2013, 63, 492-497.	1.9	235
26	Cystathionine $\beta$ -synthase, a key enzyme for homocysteine metabolism, is preferentially expressed in the radial glia/astrocyte lineage of developing mouse CNS. <i>FASEB Journal</i> , 2005, 19, 1854-1856.	0.2	209
27	Physiological Roles of Hydrogen Sulfide: Synaptic Modulation, Neuroprotection, and Smooth Muscle Relaxation. <i>Antioxidants and Redox Signaling</i> , 2005, 7, 795-803.	2.5	198
28	Identification of H <sub>2</sub> S <sub>3</sub> and H <sub>2</sub> S produced by 3-mercaptopyruvate sulfurtransferase in the brain. <i>Scientific Reports</i> , 2015, 5, 14774.	1.6	181
29	Polysulfide exerts a protective effect against cytotoxicity caused by <i>tert</i> -butylhydroperoxide through Nrf2 signaling in neuroblastoma cells. <i>FEBS Letters</i> , 2013, 587, 3548-3555.	1.3	171
30	Hydrogen Sulfide Is Produced in Response to Neuronal Excitation. <i>Journal of Neuroscience</i> , 2002, 22, 3386-3391.	1.7	160
31	Hydrogen sulfide: its production and functions. <i>Experimental Physiology</i> , 2011, 96, 833-835.	0.9	145
32	Hydrogen Sulfide and Polysulfides as Biological Mediators. <i>Molecules</i> , 2014, 19, 16146-16157.	1.7	131
33	Abnormal Lipid Metabolism in Cystathionine $\beta$ -Synthase-deficient Mice, an Animal Model for Hyperhomocysteinemia. <i>Journal of Biological Chemistry</i> , 2004, 279, 52961-52969.	1.6	130
34	Hydrogen Sulfide Protects the Retina from Light-induced Degeneration by the Modulation of Ca <sup>2+</sup> Influx. <i>Journal of Biological Chemistry</i> , 2011, 286, 39379-39386.	1.6	130
35	Cystathionine $\beta$ -synthase is enriched in the brains of Down <sup>TM</sup> s patients. <i>Biochemical and Biophysical Research Communications</i> , 2005, 338, 1547-1550.	1.0	116
36	3-Mercaptopyruvate sulfurtransferase produces potential redox regulators cysteine- and glutathione-persulfide (Cys-SSH and GSSH) together with signaling molecules H <sub>2</sub> S <sub>2</sub> , H <sub>2</sub> S <sub>3</sub> and H <sub>2</sub> S. <i>Scientific Reports</i> , 2017, 7, 10459.	1.6	116

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37	Hydrogen sulfide and polysulfides as signaling molecules. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2015, 91, 131-159.	1.6	104
38	Polysulfides (H <sub>2</sub> S <sub>n</sub> ) produced from the interaction of hydrogen sulfide (H <sub>2</sub> S) and nitric oxide (NO) activate TRPA1 channels. Scientific Reports, 2017, 7, 45995.	1.6	103
39	Nutritional essentiality of sulfur in health and disease. Nutrition Reviews, 2013, 71, 413-432.	2.6	87
40	Glucose-induced production of hydrogen sulfide may protect the pancreatic beta cells from apoptotic cell death by high glucose. FEBS Letters, 2009, 583, 377-382.	1.3	83
41	Physiological Roles of Hydrogen Sulfide and Polysulfides. Handbook of Experimental Pharmacology, 2015, 230, 61-81.	0.9	76
42	Production of Hydrogen Sulfide from D-Cysteine and Its Therapeutic Potential. Frontiers in Endocrinology, 2013, 4, 87.	1.5	75
43	Hydrogen Sulfide (H <sub>2</sub> S) and Polysulfide (H <sub>2</sub> S <sub>n</sub> ) Signaling: The First 25 Years. Biomolecules, 2021, 11, 896.	1.8	75
44	A Novel Enhancing Mechanism for Hydrogen Sulfide-producing Activity of Cystathionine Î <sup>2</sup> -Synthase. Journal of Biological Chemistry, 2002, 277, 42680-42685.	1.6	73
45	Discovery and Mechanistic Characterization of Selective Inhibitors of H <sub>2</sub> S-producing Enzyme: 3-Mercaptopyruvate Sulfurtransferase (3MST) Targeting Active-site Cysteine Persulfide. Scientific Reports, 2017, 7, 40227.	1.6	73
46	Signalling by hydrogen sulfide and polysulfides via protein S-sulfuration. British Journal of Pharmacology, 2020, 177, 720-733.	2.7	73
47	Development of a reversible fluorescent probe for reactive sulfur species, sulfane sulfur, and its biological application. Chemical Communications, 2017, 53, 1064-1067.	2.2	70
48	Signaling by hydrogen sulfide (H <sub>2</sub> S) and polysulfides (H <sub>2</sub> S <sub>n</sub> ) in the central nervous system. Neurochemistry International, 2019, 126, 118-125.	1.9	68
49	Amyloid Î <sup>2</sup> Toxicity Consists of a Ca <sup>2+</sup> -Independent Early Phase and a Ca <sup>2+</sup> -Dependent Late Phase. Journal of Neurochemistry, 1996, 67, 2074-2078.	2.1	67
50	Analysis of endogenous H <sub>2</sub> S and H <sub>2</sub> S <sub>n</sub> in mouse brain by high-performance liquid chromatography with fluorescence and tandem mass spectrometric detection. Free Radical Biology and Medicine, 2017, 113, 355-362.	1.3	67
51	Hydrogen Sulfide and Polysulfide Signaling. Antioxidants and Redox Signaling, 2017, 27, 619-621.	2.5	64
52	Hydrogen sulfide is produced by cystathionine Î <sup>3</sup> -lyase at the steady-state low intracellular Ca <sup>2+</sup> concentrations. Biochemical and Biophysical Research Communications, 2013, 431, 131-135.	1.0	63
53	Hydrogen polysulfide (H <sub>2</sub> S <sub>n</sub> ) signaling along with hydrogen sulfide (H <sub>2</sub> S) and nitric oxide (NO). Journal of Neural Transmission, 2016, 123, 1235-1245.	1.4	62
54	Polysulfide Evokes Acute Pain through the Activation of Nociceptive TRPA1 in Mouse Sensory Neurons. Molecular Pain, 2015, 11, s12990-015-0023.	1.0	61

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55	Signaling of Hydrogen Sulfide and Polysulfides. <i>Antioxidants and Redox Signaling</i> , 2015, 22, 347-349.	2.5	53
56	Alternative pathway of H <sub>2</sub> S and polysulfides production from sulfurated catalytic-cysteine of reaction intermediates of 3-mercaptopyruvate sulfurtransferase. <i>Biochemical and Biophysical Research Communications</i> , 2018, 496, 648-653.	1.0	52
57	Excess hydrogen sulfide and polysulfides production underlies a schizophrenia pathophysiology. <i>EMBO Molecular Medicine</i> , 2019, 11, e10695.	3.3	47
58	Metabolic Turnover of Hydrogen Sulfide. <i>Frontiers in Physiology</i> , 2012, 3, 101.	1.3	43
59	Sulfite protects neurons from oxidative stress. <i>British Journal of Pharmacology</i> , 2019, 176, 571-582.	2.7	43
60	Cadmium Exposure Alters Metabolomics of Sulfur-Containing Amino Acids in Rat Testes. <i>Antioxidants and Redox Signaling</i> , 2005, 7, 781-787.	2.5	40
61	Hydrogen Sulfide Enhances Reducing Activity in Neurons: Neurotrophic Role of H <sub>2</sub> S in the Brain?. <i>Antioxidants and Redox Signaling</i> , 2007, 9, 2035-2042.	2.5	39
62	Determination of oxidized and reduced nicotinamide adenine dinucleotide in cell monolayers using a single extraction procedure and a spectrophotometric assay. <i>Analytical Biochemistry</i> , 2005, 338, 131-135.	1.1	29
63	Differentiated Astrocytes Acquire Sensitivity to Hydrogen Sulfide That Is Diminished by the Transformation into Reactive Astrocytes. <i>Antioxidants and Redox Signaling</i> , 2007, 9, 257-269.	2.5	26
64	Hydrogen sulfide signalling in the CNS – Comparison with NO. <i>British Journal of Pharmacology</i> , 2020, 177, 5031-5045.	2.7	23
65	Protein phosphorylation involved in the gene expression of the hydrogen sulphide producing enzyme cystathionine β <sub>2</sub> -lyase in the pancreatic I <sup>2</sup> -cell. <i>Molecular and Cellular Endocrinology</i> , 2012, 350, 31-38.	1.6	21
66	Polysulfide promotes neuroblastoma cell differentiation by accelerating calcium influx. <i>Biochemical and Biophysical Research Communications</i> , 2015, 459, 488-492.	1.0	20
67	Hydrogen Sulfide as a Biological Mediator. <i>Antioxidants and Redox Signaling</i> , 2005, 7, 778-780.	2.5	16
68	A mechanism of retinal protection from light-induced degeneration by hydrogen sulfide. <i>Communicative and Integrative Biology</i> , 2012, 5, 169-171.	0.6	11
69	Development and Aging Expression of Cystathionine-Beta Synthase in the Temporal Lobe and Cerebellum of Down Syndrome Patients. <i>Neuroembryology and Aging</i> , 2006, 4, 202-207.	0.1	10
70	Pharmacological polysulfide suppresses glucose-stimulated insulin secretion in an ATP-sensitive potassium channel-dependent manner. <i>Scientific Reports</i> , 2019, 9, 19377.	1.6	9
71	Polysulfide inhibits hypoxia-elicited hypoxia-inducible factor activation in a mitochondria-dependent manner. <i>Mitochondrion</i> , 2021, 59, 255-266.	1.6	8
72	Hydrogen Sulfide and the Regulation of Neuronal Activities. , 2004, , 315-321.		2

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73	Physiological and Pathophysiological Functions of Hydrogen Sulfide. , 2012, , 71-98.		1
74	From neurotransmission to neuronal disorders. British Journal of Pharmacology, 2021, 178, 747-749.	2.7	1
75	Hydrogen Sulfide-Mediated Cellular Signaling and Cytoprotection. , 2013, , 181-202.		1
76	Differentiated Astrocytes Acquire Sensitivity to Hydrogen Sulfide That Is Diminished by the Transformation into Reactive Astrocytes. Antioxidants and Redox Signaling, 2006, .	2.5	0
77	Abstract 843: Cardiomyocyte Overexpression of the Hydrogen Sulfide Producing Enzyme Cystathioine gamma-Lyase Attenuates Myocardial Ischemia-Reperfusion Injury. Circulation, 2007, 116, .	1.6	0
78	Hydrogen Sulfide ( $H_2S$ ) and polysulfides ( $H_2S_n$ ) as signaling molecules. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO4-1-80.	0.0	0
79	Hydrogen trisulfide induced modulation of vascular tone in mice aorta. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO4-2-30.	0.0	0
80	The production and role of hydrogen sulfide and hydrogen polysulfides in mammalian cells. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO4-1-23.	0.0	0
81	Signaling by hydrogen polysulfides ( $H_2S_n$ ) produced by the chemical interaction between hydrogen sulfide ( $H_2S$ ) and nitric oxide (NO). Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2019, 92, 3-S21-2.	0.0	0
82	Sulfite protects neurons from oxidative stress.. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2019, 92, 1-O-20.	0.0	0
83	Signaling molecules hydrogen sulfide ( $H_2S$ ), polysulfides ( $H_2S_n$ ) and sulfite ( $H_2SO_3$ ). Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2019, 92, 2-S17-1.	0.0	0
84	Hydrogen Sulfide as a Synaptic Modulator. , 2005, , 315-321.		0