Roberto A Motterlini

List of Publications by Year
in descending order

205 papers	19,321 citations	11608 70 h-index	11581 135 g-index
218 all docs	218 docs citations	218 times ranked	14202 citing authors

#	Article	IF	Citations
1	The therapeutic potential of carbon monoxide. Nature Reviews Drug Discovery, 2010, 9, 728-743.	21.5	1,304
2	Curcumin activates the haem oxygenase-1 gene via regulation of Nrf2 and the antioxidant-responsive element. Biochemical Journal, 2003, 371, 887-895.	1.7	932
3	Carbon Monoxide-Releasing Molecules. Circulation Research, 2002, 90, E17-24.	2.0	875
4	Use of carbon monoxide as aÂtherapeutic agent: promises and challenges. Intensive Care Medicine, 2008, 34, 649-658.	3.9	754
5	Curcumin, an antioxidant and anti-inflammatory agent, induces heme oxygenase-1 and protects endothelial cells against oxidative stress. Free Radical Biology and Medicine, 2000, 28, 1303-1312.	1.3	721
6	Cardioprotective Actions by a Water-Soluble Carbon Monoxideâ€“Releasing Molecule. Circulation Research, 2003, 93, e2-8.	2.0	596
7	Carbon monoxide-releasing molecules (CO-RMs) attenuate the inflammatory response elicited by lipopolysaccharide in RAW264.7 murine macrophages. British Journal of Pharmacology, 2005, 145, 800-810.	2.7	344
8	CORMâ€A1: a new pharmacologically active carbon monoxideâ€releasing molecule. FASEB Journal, 2005, 19, 1-24.	0.2	331
9	Heme oxygenase-1-derived bilirubin ameliorates postischemic myocardial dysfunction. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H643-H651.	1.5	326
10	Caffeic Acid Phenethyl Ester and Curcumin: A Novel Class of Heme Oxygenase-1 Inducers. Molecular Pharmacology, 2002, 61, 554-561.	1.0	288
11	Thiol Compounds Interact with Nitric Oxide in Regulating Heme Oxygenase-1 Induction in Endothelial Cells. Journal of Biological Chemistry, 1997, 272, 18411-18417.	1.6	280
12	Dynamics of haem oxygenase-1 expression and bilirubin production in cellular protection against oxidative stress. Biochemical Journal, 2000, 348, 615-619.	1.7	277
13	Heme Oxygenase-1â€“Derived Carbon Monoxide Contributes to the Suppression of Acute Hypertensive Responses In Vivo. Circulation Research, 1998, 83, 568-577.	2.0	270
14	Vasoactive properties of CORM-3, a novel water-soluble carbon monoxide-releasing molecule. British Journal of Pharmacology, 2004, 142, 453-460.	2.7	263
15	Therapeutic applications of carbon monoxide-releasing molecules. Expert Opinion on Investigational Drugs, 2005, 14, 1305-1318.	1.9	261
16	The heme oxygenase pathway and its interaction with nitric oxide in the control of cellular homeostasis. Free Radical Research, 1999, 31, 459-475.	1.5	249
17	Endothelial Heme Oxygenase-1 Induction by Hypoxia. Journal of Biological Chemistry, 2000, 275, 13613-13620.	1.6	241
18	Metal Carbonyls: A New Class of Pharmaceuticals?. Angewandte Chemie - International Edition, 2003, 42, 3722-3729.	7.2	239

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19	Bioactivity and Pharmacological Actions of Carbon Monoxide-Releasing Molecules. Current Pharmaceutical Design, 2003, 9, 2525-2539.	0.9	235
20	Bilirubin decreases NOS2 expression via inhibition of NAD(P)H oxidase: implications for protection against endotoxic shock in rats. FASEB Journal, 2005, 19, 1890-1892.	0.2	230
21	Mitochondrial Respiratory Chain and NAD(P)H Oxidase Are Targets for theAntiproliferative Effect of Carbon Monoxide in Human Airway SmoothMuscle. Journal of Biological Chemistry, 2005, 280, 25350-25360.	1.6	220
22	Carbon monoxide is a major contributor to the regulation of vascular tone in aortas expressing high levels of haeme oxygenase-1. British Journal of Pharmacology, 1998, 125, 1437-1444.	2.7	209
23	Mesenchymal stem cells sense mitochondria released from damaged cells as danger signals to activate their rescue properties. Cell Death and Differentiation, 2017, 24, 1224-1238.	5.0	202
24	Administration of a CO-releasing molecule at the time of reperfusion reduces infarct size in vivo. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 286, H1649-H1653.	1.5	193
25	Heme Oxygenase and Angiogenic Activity of Endothelial Cells: Stimulation by Carbon Monoxide and Inhibition by Tin Protoporphyrin-IX. Antioxidants and Redox Signaling, 2003, 5, 155-162.	2.5	182
26	Biological signaling by carbon monoxide and carbon monoxide-releasing molecules. American Journal of Physiology - Cell Physiology, 2017, 312, C302-C313.	2.1	179
27	Peroxynitrite induces haem oxygenase-1 in vascular endothelial cells: a link to apoptosis. Biochemical Journal, 1999, 339, 729-736.	1.7	177
28	Chemistry and biological activities of CO-releasing molecules (CORMs) and transition metal complexes. Dalton Transactions, 2007, , 1651.	1.6	174
29	Carbon Monoxide Rescues Mice from Lethal Sepsis by Supporting Mitochondrial Energetic Metabolism and Activating Mitochondrial Biogenesis. Journal of Pharmacology and Experimental Therapeutics, 2009, 329, 641-648.	1.3	171
30	Interaction of bilirubin and biliverdin with reactive nitrogen species. FEBS Letters, 2003, 543, 113-119.	1.3	167
31	Heme Oxygenase Activity Modulates Vascular Endothelial Growth Factor Synthesis in Vascular Smooth Muscle Cells. Antioxidants and Redox Signaling, 2002, 4, 229-240.	2.5	165
32	COâ€“metal interaction: vital signaling from a lethal gas. Trends in Biochemical Sciences, 2006, 31, 614-621.	3.7	164
33	Heme Oxygenase-1 As a Target for Drug Discovery. Antioxidants and Redox Signaling, 2014, 20, 1810-1826.	2.5	160
34	Heme Oxygenase-1 and Carbon Monoxide in the Heart. Circulation Research, 2016, 118, 1940-1959.	2.0	160
35	Modification of the deoxy-myoglobin/carbonmonoxy-myoglobin UV-vis assay for reliable determination of CO-release rates from organometallic carbonyl complexes. Dalton Transactions, 2011, 40, 5755.	1.6	155
36	Carbon monoxide-releasing molecules (CO-RMs): vasodilatory, anti-ischaemic and anti-inflammatory activities. Biochemical Society Transactions, 2007, 35, 1142-1146.	1.6	154

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37	CO and NO in medicine. Chemical Communications, 2007, , 4197.	2.2	153
38	Metal carbonyls as pharmaceuticals? [Ru(CO)3Cl(glycinate)], a CO-releasing molecule with an extensive aqueous solution chemistry. Dalton Transactions, 2007, , 1500.	1.6	153
39	Small molecule activators of the Nrf2-HO-1 antioxidant axis modulate heme metabolism and inflammation in BV2 microglia cells. Pharmacological Research, 2013, 76, 132-148.	3.1	150
40	Regulation of Heme Oxygenase-1 by Redox Signals Involving Nitric Oxide. Antioxidants and Redox Signaling, 2002, 4, 615-624.	2.5	140
41	Administration of a CO-releasing molecule induces late preconditioning against myocardial infarction. Journal of Molecular and Cellular Cardiology, 2005, 38, 127-134.	0.9	137
42	Carbon Monoxide-releasing Antibacterial Molecules Target Respiration and Global Transcriptional Regulators. Journal of Biological Chemistry, 2009, 284, 4516-4524.	1.6	137
43	A carbon monoxideâ€releasing molecule (CORMâ€3) exerts bactericidal activity against Pseudomonas aeruginosa and improves survival in an animal model of bacteraemia. FASEB Journal, 2009, 23, 1023-1031.	0.2	136
44	Human and murine macrophages exhibit differential metabolic responses to lipopolysaccharide - A divergent role for glycolysis. Redox Biology, 2019, 22, 101147.	3.9	133
45	A carbon monoxide-releasing molecule (CORM-3) uncouples mitochondrial respiration and modulates the production of reactive oxygen species. Free Radical Biology and Medicine, 2011, 50, 1556-1564.	1.3	126
46	[Mn(CO)4{S2CNMe(CH2CO2H)}], a new water-soluble CO-releasing molecule. Dalton Transactions, 2011, 40, 4230.	1.6	124
47	Protection against cisplatin-induced nephrotoxicity by a carbon monoxide-releasing molecule. American Journal of Physiology - Renal Physiology, 2006, 290, F789-F794.	1.3	117
48	Carbon Monoxide Inhibits TLR-Induced Dendritic Cell Immunogenicity. Journal of Immunology, 2009, 182, 1877-1884.	0.4	116
49	Treatment with CO-RMs during cold storage improves renal function at reperfusion. Kidney International, 2006, 69, 239-247.	2.6	114
50	Water-soluble CO-releasing molecules reduce the development of postoperative ileus via modulation of MAPK/HO-1 signalling and reduction of oxidative stress. Gut, 2009, 58, 347-356.	6.1	107
51	Dynamics of haem oxygenase-1 expression and bilirubin production in cellular protection against oxidative stress. Biochemical Journal, 2000, 348, 615.	1.7	99
52	Induction of Heme Oxygenase 1 by Nitrosative Stress. Journal of Biological Chemistry, 2002, 277, 40666-40674.	1.6	99
53	Differential Antibacterial Activity Against Pseudomonas aeruginosa by Carbon Monoxide-Releasing Molecules. Antioxidants and Redox Signaling, 2012, 16, 153-163.	2.5	99
54	Differential Activation of Heme Oxygenase-1 by Chalcones and Rosolic Acid in Endothelial Cells. Journal of Pharmacology and Experimental Therapeutics, 2005, 312, 686-693.	1.3	96

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55	Carbon monoxide released by CORM-3 inhibits human platelets by a mechanism independent of soluble guanylate cyclase. Cardiovascular Research, 2006, 71, 393-401.	1.8	94
56	cGMP Produced by NO-Sensitive Guanylyl Cyclase Essentially Contributes to Inflammatory and Neuropathic Pain by Using Targets Different from cGMP-Dependent Protein Kinase I. Journal of Neuroscience, 2008, 28, 8568-8576.	1.7	94
57	CORM-3, a carbon monoxide-releasing molecule, alters the inflammatory response and reduces brain damage in a rat model of hemorrhagic stroke*. Critical Care Medicine, 2012, 40, 544-552.	0.4	94
58	Bilirubin and S-nitrosothiols interaction: evidence for a possible role of bilirubin as a scavenger of nitric oxide. Biochemical Pharmacology, 2003, 66, 2355-2363.	2.0	93
59	Role of heme oxygenase-1 in hypoxia-reoxygenation: requirement of substrate heme to promote cardioprotection. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 281, H1976-H1984.	1.5	86
60	Carbon Monoxide-Releasing Molecules Modulate Leukocyte-Endothelial Interactions under Flow. Journal of Pharmacology and Experimental Therapeutics, 2007, 321, 656-662.	1.3	84
61	Early recognition of a discordant xenogeneic organ by human circulating lymphocytes. Journal of Immunology, 1992, 149, 1416-23.	0.4	82
62	Emerging concepts on the anti-inflammatory actions of carbon monoxide-releasing molecules (CO-RMs). Medical Gas Research, 2012, 2, 28.	1.2	81
63	Î¼2-Alkyne dicobalt(0)hexacarbonyl complexes as carbon monoxide-releasing molecules (CO-RMs): probing the release mechanism. Dalton Transactions, 2009, , 3653.	1.6	79
64	Peroxynitrite induces haem oxygenase-1 in vascular endothelial cells: a link to apoptosis. Biochemical Journal, 1999, 339, 729.	1.7	78
65	Modulation of Thrombin-Induced Neuroinflammation in BV-2 Microglia by Carbon Monoxide-Releasing Molecule 3. Journal of Pharmacology and Experimental Therapeutics, 2006, 318, 1315-1322.	1.3	78
66	Treatment with a CO-releasing molecule (CORM-3) reduces joint inflammation and erosion in murine collagen-induced arthritis. Annals of the Rheumatic Diseases, 2007, 67, 1211-1217.	0.5	78
67	Carbon monoxide induces a late preconditioning-mimetic cardioprotective and antiapoptotic milieu in the myocardium. Journal of Molecular and Cellular Cardiology, 2012, 52, 228-236.	0.9	78
68	Bioactive Properties of Iron-Containing Carbon Monoxide-Releasing Molecules. Journal of Pharmacology and Experimental Therapeutics, 2006, 318, 403-410.	1.3	76
69	Heme oxygenase-1 mediates the anti-inflammatory actions of 2â€²-hydroxychalcone in RAW 264.7 murine macrophages. American Journal of Physiology - Cell Physiology, 2006, 290, C1092-C1099.	2.1	71
70	Syntheses, structural characterization and CO releasing properties of boranocarbonate [H3BCO2H]â^' derivatives. Organic and Biomolecular Chemistry, 2010, 8, 4849.	1.5	70
71	Carbon Monoxide Reduces Neuropathic Pain and Spinal Microglial Activation by Inhibiting Nitric Oxide Synthesis in Mice. PLoS ONE, 2012, 7, e43693.	1.1	70
72	Î·4-Pyrone iron(0)carbonyl complexes as effective CO-releasing molecules (CO-RMs). Bioorganic and Medicinal Chemistry Letters, 2006, 16, 995-998.	1.0	68

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73	Vascular and angiogenic activities of CORM-401, an oxidant-sensitive CO-releasing molecule. Biochemical Pharmacology, 2016, 102, 64-77.	2.0	68
74	Treatment with Carbon Monoxide-releasing Molecules and an HO-1 Inducer Enhances the Effects and Expression of Âμ-Opioid Receptors during Neuropathic Pain. Anesthesiology, 2013, 118, 1180-1197.	1.3	66
75	Protective Role of Heme Oxygenases against Endotoxin-induced Diaphragmatic Dysfunction in Rats. American Journal of Respiratory and Critical Care Medicine, 2001, 163, 753-761.	2.5	65
76	Î·1-2-Pyrone metal carbonyl complexes as CO-releasing molecules (CO-RMs): A delicate balance between stability and CO liberation. Dalton Transactions, 2007, , 3603.	1.6	65
77	Prevention of clinical and histological signs of proteolipid protein (PLP)-induced experimental allergic encephalomyelitis (EAE) in mice by the water-soluble carbon monoxide-releasing molecule (CORM)-A1. Clinical and Experimental Immunology, 2011, 163, 368-374.	1.1	65
78	Nrf2 activators modulate oxidative stress responses and bioenergetic profiles of human retinal epithelial cells cultured in normal or high glucose conditions. Pharmacological Research, 2015, 99, 296-307.	3.1	65
79	Involvement of the Heme Oxygenaseâ€“Carbon Monoxide Pathway in Keratinocyte Proliferation. Biochemical and Biophysical Research Communications, 1997, 241, 215-220.	1.0	64
80	Haem and nitric oxide: synergism in the modulation of the endothelial haem oxygenase-1 pathway. Biochemical Journal, 2003, 372, 381-390.	1.7	62
81	Carbon Monoxide-Mediated Activation of Large-Conductance Calcium-Activated Potassium Channels Contributes to Mesenteric Vasodilatation in Cirrhotic Rats. Journal of Pharmacology and Experimental Therapeutics, 2007, 321, 187-194.	1.3	62
82	Generation of bile pigments by haem oxygenase: a refined cellular strategy in response to stressful insults. Biochemical Society Symposia, 2004, 71, 177-192.	2.7	60
83	Carbon monoxide released by CORM-401 uncouples mitochondrial respiration and inhibits glycolysis in endothelial cells: A role for mitoBKCa channels. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1297-1309.	0.5	60
84	[(Î·-C5H4R)Fe(CO)2X], X = Cl, Br, I, NO3, CO2Me and [(Î·-C5H4R)Fe(CO)3]+, R = (CH2)nCO2Me (n = 0â€“2), and CO2CH2CH2OH: a new group of CO-releasing molecules. Dalton Transactions, 2007, , 4962.	1.6	59
85	Carbon Monoxide Rapidly Impairs Alveolar Fluid Clearance by Inhibiting Epithelial Sodium Channels. American Journal of Respiratory Cell and Molecular Biology, 2009, 41, 639-650.	1.4	58
86	A Precursor of the Nitric Oxide Donor SIN-1 Modulates the Stress Protein Heme Oxygenase-1 in Rat Liver. Biochemical and Biophysical Research Communications, 1996, 225, 167-172.	1.0	56
87	Mitochondrial and Cellular Heme-Dependent Proteins as Targets for the Bioactive Function of the Heme Oxygenase/Carbon Monoxide System. Antioxidants and Redox Signaling, 2007, 9, 2139-2156.	2.5	56
88	Protective effects of a carbon monoxide-releasing molecule (CORM-3) during hepatic cold preservation. Cryobiology, 2009, 58, 248-255.	0.3	54
89	The Carbon Monoxide Releasing Molecule CORM-2 Attenuates Pseudomonas aeruginosa Biofilm Formation. PLoS ONE, 2012, 7, e35499.	1.1	53
90	Carbon Monoxide Improves Cardiac Function and Mitochondrial Population Quality in a Mouse Model of Metabolic Syndrome. PLoS ONE, 2012, 7, e41836.	1.1	53

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91	Antithrombotic Properties of Water-Soluble Carbon Monoxide-Releasing Molecules. Arteriosclerosis, Thrombosis, and Vascular Biology, 2012, 32, 2149-2157.	1.1	52
92	Carbon monoxide reverses the metabolic adaptation of microglia cells to an inflammatory stimulus. Free Radical Biology and Medicine, 2017, 104, 311-323.	1.3	51
93	Structureâ^'Activity Relationships of Methoxychalcones as Inducers of Heme Oxygenase-1. Chemical Research in Toxicology, 2008, 21, 1484-1494.	1.7	50
94	Heme oxygenaseâ€1 induction attenuates senescence in chronic obstructive pulmonary disease lung fibroblasts by protecting against mitochondria dysfunction. Aging Cell, 2018, 17, e12837.	3.0	50
95	Cell-free hemoglobin potentiates acetylcholine-induced coronary vasoconstriction in rabbit hearts. Journal of Applied Physiology, 1993, 75, 2224-2233.	1.2	49
96	Beneficial effects of carbon monoxide-releasing molecules on post-ischemic myocardial recovery. Life Sciences, 2007, 80, 1619-1626.	2.0	49
97	Improved Myocardial Function After Cold Storage With Preservation Solution Supplemented With a Carbon Monoxideâ€"Releasing Molecule (CORM-3). Journal of Heart and Lung Transplantation, 2007, 26, 1192-1198.	0.3	49
98	HYCO-3, a dual CO-releaser/Nrf2 activator, reduces tissue inflammation in mice challenged with lipopolysaccharide. Redox Biology, 2019, 20, 334-348.	3.9	49
99	Design and Synthesis of New Hybrid Molecules That Activate the Transcription Factor Nrf2 and Simultaneously Release Carbon Monoxide. Chemistry - A European Journal, 2014, 20, 14698-14704.	1.7	48
100	Diverse Nrf2 Activators Coordinated to Cobalt Carbonyls Induce Heme Oxygenase-1 and Release Carbon Monoxide in Vitro and in Vivo. Journal of Medicinal Chemistry, 2016, 59, 756-762.	2.9	48
101	Detection and Removal of Endogenous Carbon Monoxide by Selective and Cell-Permeable Hemoprotein Model Complexes. Journal of the American Chemical Society, 2017, 139, 5984-5991.	6.6	47
102	Interaction of Carbon Monoxide with Transition Metals: Evolutionary Insights into Drug Target Discovery. Current Drug Targets, 2010, 11, 1595-1604.	1.0	47
103	MR (Mineralocorticoid Receptor) Induces Adipose Tissue Senescence and Mitochondrial Dysfunction Leading to Vascular Dysfunction in Obesity. Hypertension, 2019, 73, 458-468.	1.3	46
104	Carbon Monoxide-Releasing Molecules: A Pharmacological Expedient to Counteract Inflammation. Current Pharmaceutical Design, 2008, 14, 465-472.	0.9	45
105	<scp>CO</scp> and <scp>CO</scp>â€releasing molecules (<scp>CO</scp>â€<scp>RMs</scp>) in acute gastrointestinal inflammation. British Journal of Pharmacology, 2015, 172, 1557-1573.	2.7	45
106	Inhibition of platelet aggregation by carbon monoxide-releasing molecules (CO-RMs): comparison with NO donors. Naunyn-Schmiedeberg's Archives of Pharmacology, 2012, 385, 641-650.	1.4	44
107	Changes in temperature modulate heme oxygenase-1 induction by curcumin in renal epithelial cells. Biochemical and Biophysical Research Communications, 2003, 308, 950-955.	1.0	43
108	Positive inotropic effects of carbon monoxideâ€releasing molecules (COâ€RMs) in the isolated perfused rat heart. British Journal of Pharmacology, 2006, 149, 1104-1112.	2.7	41

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109	Iron indenyl carbonyl compounds: CO-releasing molecules. Dalton Transactions, 2010, 39, 8967.	1.6	40
110	Polyamine Conjugation of Curcumin Analogues toward the Discovery of Mitochondria-Directed Neuroprotective Agents. Journal of Medicinal Chemistry, 2010, 53, 7264-7268.	2.9	40
111	p21-Dependent Protective Effects of a Carbon Monoxideâ€“Releasing Molecule-3 in Pulmonary Hypertension. Arteriosclerosis, Thrombosis, and Vascular Biology, 2014, 34, 304-312.	1.1	39
112	CORM-3, a water soluble CO-releasing molecule, uncouples mitochondrial respiration via interaction with the phosphate carrier. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 201-209.	0.5	39
113	The carbon monoxideâ€releasing molecule, cormâ€3 (ru(co)₃cl(glycinate)), targets respiration and oxidases in campylobacter jejuni, generating hydrogen peroxide. IUBMB Life, 2011, 63, 363-371.	1.5	38
114	Antioxidant potential of CORM-A1 and resveratrol during TNF-Î±/cycloheximide-induced oxidative stress and apoptosis in murine intestinal epithelial MODE-K cells. Toxicology and Applied Pharmacology, 2015, 288, 161-178.	1.3	38
115	Homocysteine attenuates endothelial haem oxygenase-1 induction by nitric oxide (NO) and hypoxia. FEBS Letters, 2001, 508, 403-406.	1.3	37
116	Carbon monoxideâ€“induced metabolic switch in adipocytes improves insulin resistance in obese mice. JCI Insight, 2018, 3, .	2.3	36
117	The CO-releasing molecule CORM-3 protects against articular degradation in the K/BxN serum transfer arthritis model. European Journal of Pharmacology, 2010, 634, 184-191.	1.7	35
118	Heme oxygenase-1: an emerging therapeutic target to curb cardiac pathology. Basic Research in Cardiology, 2014, 109, 450.	2.5	35
119	Oxidative injury in reoxygenated and reperfused heartsâ˜†. Free Radical Biology and Medicine, 1994, 16, 255-262.	1.3	34
120	Heme oxygenase is expressed in human pulmonary artery smooth muscle where carbon monoxide has an anti-proliferative role. European Journal of Pharmacology, 2003, 473, 135-141.	1.7	34
121	Carbon Monoxide in Biology and Microbiology: Surprising Roles for the â€œDetroit Perfumeâ€• Advances in Microbial Physiology, 2009, 56, 85-167.	1.0	34
122	TLR4 activation alters labile heme levels to regulate BACH1 and heme oxygenase-1 expression in macrophages. Free Radical Biology and Medicine, 2019, 137, 131-142.	1.3	33
123	Sensitive quantification of carbon monoxide in vivoÂreveals a protective role of circulating hemoglobin in COÂintoxication. Communications Biology, 2021, 4, 425.	2.0	32
124	Functional and metabolic effects of propionyl-L-carnitine in the isolated perfused hypertrophied rat heart. Molecular and Cellular Biochemistry, 1992, 116, 139-145.	1.4	31
125	In vitro and in vivo effects of the carbon monoxideâ€releasing molecule, CORMâ€3, in the xenogeneic pigâ€toâ€primate context. Xenotransplantation, 2009, 16, 99-114.	1.6	31
126	Hemin prevents in-stent stenosis in rat and rabbit models by inducing heme-oxygenase-1. Journal of Vascular Surgery, 2010, 51, 417-428.	0.6	31

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127	New Types of CO-Releasing Molecules (CO-RMs), Based on Iron Dithiocarbamate Complexes and [Fe(CO)₃I(S₂COEt)]. Organometallics, 2012, 31, 5823-5834.	1.1	31
128	A cytoprotective role for the heme oxygenaseâ€1/CO pathway during neural differentiation of human mesenchymal stem cells. Journal of Neuroscience Research, 2008, 86, 1927-1935.	1.3	30
129	Carbon monoxide shifts energetic metabolism from glycolysis to oxidative phosphorylation in endothelial cells. FEBS Letters, 2016, 590, 3469-3480.	1.3	30
130	Hemoglobin-nitric oxide interaction and its implications. Transfusion Medicine Reviews, 1996, 10, 77-84.	0.9	29
131	The comparative effects of the NOS inhibitor, nï‰-nitro-l-arginine, and the haemoxygenase inhibitor, zinc protoporphyrin IX, on tumour blood flow. International Journal of Radiation Oncology Biology Physics, 1998, 42, 849-853.	0.4	29
132	Curcumin reduces cold storage-induced damage in human cardiac myoblasts. Experimental and Molecular Medicine, 2007, 39, 139-148.	3.2	29
133	A carbon monoxideâ€releasing molecule (CORMâ€3) abrogates polymorphonuclear granulocyteâ€induced activation of endothelial cells and mast cells. FASEB Journal, 2008, 22, 3380-3388.	0.2	29
134	Differential Effects of CORM-2 and CORM-401 in Murine Intestinal Epithelial MODE-K Cells under Oxidative Stress. Frontiers in Pharmacology, 2017, 8, 31.	1.6	29
135	Induction of heme oxygenase-1 in factor VIIIâ€“deficient mice reduces the immune response to therapeutic factor VIII. Blood, 2010, 115, 2682-2685.	0.6	28
136	A re-investigation of [Fe(l-cysteinate)2(CO)2]2â^': an example of non-heme CO coordination of possible relevance to CO binding to ion channel receptors. Dalton Transactions, 2011, 40, 8328.	1.6	28
137	Vasorelaxing effects and inhibition of nitric oxide in macrophages by new iron-containing carbon monoxide-releasing molecules (CO-RMs). Pharmacological Research, 2013, 68, 108-117.	3.1	28
138	A water-soluble carbon monoxide-releasing molecule (CORM-3) lowers intraocular pressure in rabbits. British Journal of Ophthalmology, 2009, 93, 254-257.	2.1	27
139	Measuring left ventricular function in the normal, infarcted and CORM-3-preconditioned mouse heart using complex admittance-derived pressure volume loops. Journal of Pharmacological and Toxicological Methods, 2009, 59, 94-99.	0.3	27
140	Human Sickle Cell Blood Modulates Endothelial Heme Oxygenase Activity. Arteriosclerosis, Thrombosis, and Vascular Biology, 2010, 30, 305-312.	1.1	25
141	LIPE-related lipodystrophic syndrome: clinical features and disease modeling using adipose stem cells. European Journal of Endocrinology, 2021, 184, 155-168.	1.9	25
142	TNF-α/Cycloheximide-Induced Oxidative Stress and Apoptosis in Murine Intestinal Epithelial MODE-K Cells. Current Pharmaceutical Design, 2012, 18, 4414-4425.	0.9	24
143	Therapeutic effects of CO-releaser/Nrf2 activator hybrids (HYCOs) in the treatment of skin wound, psoriasis and multiple sclerosis. Redox Biology, 2020, 34, 101521.	3.9	24
144	Effectiveness of Novel Imidazole-Dioxolane Heme Oxygenase Inhibitors in Renal Proximal Tubule Epithelial Cells. Journal of Pharmacology and Experimental Therapeutics, 2007, 323, 763-770.	1.3	23

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145	Theoretical Insights into the Mechanism of Carbon Monoxide (CO) Release from COâ€Releasing Molecules. Chemistry - A European Journal, 2012, 18, 9267-9275.	1.7	23
146	Derivatives of Sodium Boranocarbonate as Novel CO-Releasing Molecules (CO-RMs). Chimia, 2008, 62, 277.	0.3	22
147	Depression of endothelial and smooth muscle cell oxygen consumption by endotoxin. American Journal of Physiology - Heart and Circulatory Physiology, 1998, 275, H776-H782.	1.5	21
148	Fibre type specificity of haem oxygenase-1 induction in rat skeletal muscle. FEBS Letters, 1999, 458, 257-260.	1.3	21
149	Modulation of cellular bioenergetics by CO-releasing molecules and NO-donors inhibits the interaction of cancer cells with human lung microvascular endothelial cells. Pharmacological Research, 2018, 136, 160-171.	3.1	21
150	Role of Carbon Monoxide and Biliverdin in Renal Ischemia/Reperfusion Injury. Nephron Experimental Nephrology, 2006, 104, e135-e139.	2.4	20
151	The Interaction of Nitric Oxide with Distinct Hemoglobins Differentially Amplifies Endothelial Heme Uptake and Heme Oxygenase-1 Expression. Journal of Pharmacology and Experimental Therapeutics, 2006, 317, 1125-1133.	1.3	20
152	Relaxant Effect of a Water Soluble Carbon Monoxide-Releasing Molecule (CORM-3) on Spontaneously Hypertensive Rat Aortas. Cardiovascular Drugs and Therapy, 2012, 26, 285-292.	1.3	20
153	Vasoconstrictor Effects in Isolated Rabbit Heart Perfused with Bis(3,5-Dibromosalicyl) Fumarate Cross-Linked Hemoglobin (Î±Î±hb). Artificial Cells, Blood Substitutes, and Biotechnology, 1994, 22, 565-575.	0.9	19
154	Acute myocardial infarction in streptozotocin-induced hyperglycaemic rats: protection by a carbon monoxide-releasing molecule (CORM-3). Naunyn-Schmiedeberg's Archives of Pharmacology, 2012, 385, 137-144.	1.4	19
155	Permanent Culture of Macrophages at Physiological Oxygen Attenuates the Antioxidant and Immunomodulatory Properties of Dimethyl Fumarate. Journal of Cellular Physiology, 2015, 230, 1128-1138.	2.0	19
156	CORM â€401 induces calcium signalling, NO increase and activation of pentose phosphate pathway in endothelial cells. FEBS Journal, 2018, 285, 1346-1358.	2.2	19
157	Donor HO-1 Expression Inhibits Intimal Hyperplasia in Unmanipulated Graft Recipients: A Potential Role for CD8+ T-Cell Modulation by Carbon Monoxide. Transplantation, 2009, 88, 653-661.	0.5	18
158	Morphine-Induced Ocular Hypotension Is Modulated by Nitric Oxide and Carbon Monoxide: Role of Î¼₃Receptors. Journal of Ocular Pharmacology and Therapeutics, 2010, 26, 31-36.	0.6	18
159	Relationship Between Leukocyte Kinetics and Behavioral Tests Changes in the Inflammatory Process of Hemorrhagic Stroke Recovery. International Journal of Neuroscience, 2010, 120, 765-773.	0.8	17
160	Heme oxygenase-1â€"Dependent anti-inflammatory effects of atorvastatin in zymosan-injected subcutaneous air pouch in mice. PLoS ONE, 2019, 14, e0216405.	1.1	17
161	Human red cell age, oxygen affinity and oxygen transport. Respiration Physiology, 1990, 79, 69-79.	2.8	16
162	Myocardial metabolism and function in acutely ischemic and hypoxemic isolated rat hearts. Journal of Molecular and Cellular Cardiology, 1995, 27, 1213-1218.	0.9	16

#	Article	IF	Citations
163	Nitric oxide synthase type I (nNOS), vascular endothelial growth factor (VEGF) and myoglobin-like expression in skeletal muscle of Antarctic icefishes (Notothenioidei: Channichthyidae). Polar Biology, 2003, 26, 458-462.	0.5	16
164	Increased Sirt1 secreted from visceral white adipose tissue is associated with improved glucose tolerance in obese Nrf2-deficient mice. Redox Biology, 2021, 38, 101805.	3.9	16
165	Adipose tissue senescence is mediated by increased ATP content after a shortâ€term highâ€fat diet exposure. Aging Cell, 2021, 20, e13421.	3.0	16
166	Red cell aging and active calcium transport. Experimental Gerontology, 1990, 25, 279-286.	1.2	15
167	Isothiocyanateâ€“cysteine conjugates protect renal tissue against cisplatin-induced apoptosis via induction of heme oxygenase-1. Pharmacological Research, 2014, 81, 1-9.	3.1	15
168	Design and Biological Evaluation of Manganeseâ€•and Rutheniumâ€Based Hybrid COâ€RMs (HYCOs). ChemMedChem, 2019, 14, 1684-1691.	1.6	15
169	The Autoxidation of Î±Î± Cross-Linked Hemoglobin: A Possible Role in the Oxidative Stress to Endothelium. Artificial Cells, Blood Substitutes, and Biotechnology, 1995, 23, 291-301.	0.9	14
170	Effects of carbon monoxide on trout and lamprey vessels. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2009, 296, R141-R149.	0.9	14
171	CO-releasing molecules: avoiding toxicity and exploiting the beneficial effects of CO for the treatment of cardiovascular disorders. Future Medicinal Chemistry, 2013, 5, 367-369.	1.1	14
172	A carbon monoxide-releasing molecule (CORM-3) attenuates lipopolysaccharide- and interferon-gamma-induced inflammation in microglia. Pharmacological Reports, 2006, 58 Suppl, 132-44.	1.5	14
173	Cyclophilins Are Induced by Hypoxia and Heat Stress in Myogenic Cells. Biochemical and Biophysical Research Communications, 1997, 237, 6-9.	1.0	13
174	Downregulation of the Inflammatory Response by CORM-3 Results in Protective Effects in a Model of Postmenopausal Arthritis. Calcified Tissue International, 2012, 91, 69-80.	1.5	13
175	Inhibition of Adipose Tissue Beiging by HIV Integrase Inhibitors, Dolutegravir and Bictegravir, Is Associated with Adipocyte Hypertrophy, Hypoxia, Elevated Fibrosis, and Insulin Resistance in Simian Adipose Tissue and Human Adipocytes. Cells, 2022, 11, 1841.	1.8	13
176	Unusual Dynamics of Ligand Binding to the Heme Domain of the Bacterial CO Sensor Protein RcoM-2. Journal of Physical Chemistry B, 2016, 120, 10686-10694.	1.2	12
177	The CO-releasing molecule CORM-3 protects adult cardiomyocytes against hypoxia-reoxygenation by modulating pH restoration. European Journal of Pharmacology, 2019, 862, 172636.	1.7	12
178	The Relationship Between the Blood Oxygen Transport and the Human Red Cell Aging Process. Advances in Experimental Medicine and Biology, 1991, 307, 115-123.	0.8	12
179	Production of carbon monoxide from a He/CO₂ plasma jet as a new strategy for therapeutic applications. Plasma Processes and Polymers, 2021, 18, 2100069.	1.6	11
180	CO Liberated From a Carbon Monoxide-Releasing Molecule Exerts a Positive Inotropic Effect in Doxorubicin-Induced Cardiomyopathy. Journal of Cardiovascular Pharmacology, 2010, 55, 168-175.	0.8	10

#	Article	IF	Citations
181	Genetic BACH1 deficiency alters mitochondrial function and increases NLRP3 inflammasome activation in mouse macrophages. Redox Biology, 2022, 51, 102265.	3.9	10
182	Ischaemia/reperfusion in the posthypoxaemic re-oxygenated myocardium: haemodynamic study in the isolated perfused rat heart. Perfusion (United Kingdom), 1993, 8, 113-118.	0.5	9
183	Evaluation of the effects of a novel carbon monoxide releasing molecule (CORM-3) in an in vitro model of cardiovascular inflammation.. Inflammation Research, 2006, 55, S05-S06.	1.6	9
184	Dual role of hypoxanthine in the reoxygenation of hypoxic isolated rat hearts. Journal of Molecular and Cellular Cardiology, 1991, 23, 77-82.	0.9	8
185	Interaction of Hemoglobin with Nitric Oxide and Carbon Monoxide: Physiological Implications. , 1996, , 74-98.		7
186	Carbon monoxide releasing molecule A1 reduces myocardial damage after acute myocardial infarction in a porcine model. Journal of Cardiovascular Pharmacology, 2021, Publish Ahead of Print, e656-e661.	0.8	5
187	Studies on the Development of Carbon Monoxide-Releasing Molecules. , 2001, , 249-271.		5
188	Luminal Administration of a Water-soluble Carbon Monoxideâ€“releasing Molecule (CORM-3) Mitigates Ischemia/Reperfusion Injury in Rats Following Intestinal Transplantation. Transplantation, 2022, 106, 1365-1375.	0.5	5
189	Heme oxygenase-1 in diabetic vascular dysfunction. Vascular Pharmacology, 2014, 62, 132-133.	1.0	3
190	Enhanced Oxidation of Bis(3,5-Dibromosalicyl) Fumarate Î±-Î± Cross Unked Hemoglobin by Free Radicals Generated by Xanthine/Xanthine Oxidase. Artificial Cells, Blood Substitutes, and Biotechnology, 1994, 22, 517-524.	0.9	2
191	Anti-inflammatory activities of carbon monoxide-releasing molecules (CO-RMs) in the brain. SpringerPlus, 2015, 4, L41.	1.2	2
192	Carbon Monoxide and Iron, by-Products of Heme Oxygenase, Modulate Vascular Endothelial Growth Factor Synthesis in Vascular Smooth Muscle Cells. , 2002, , 97-107.		2
193	Nitric Oxide and the Heme Oxygenase/Carbon Monoxide System. , 2001, , 111-124.		1
194	CORM-401, an orally active carbon monoxide-releasing molecule, increases body temperature by activating non-shivering thermogenesis in rats. Temperature, 0, , 1-8.	1.7	1
195	RELATIONSIIIP BETWEEN NITRIC OXIDE, CARBON MONOXIDE AND VASCULAR ENDOTHELIAL GROWTII FACTOR SYNTHESIS BY VASCULAR SMOOTII MUSCLE CELLS IN NORMOXIC AND IIYPOXIC CONDITIONS. Shock, 1999, 12, 45.	1.0	0
196	Metal Carbonyls: A New Class of Pharmaceuticals?. ChemInform, 2003, 34, no.	0.1	0
197	193 Carbon monoxide-mediated activation of large conductance calcium-activated potassium channels contributes to mesenteric vasodilatation in cirrhotic rats with ascites. Journal of Hepatology, 2006, 44, S80.	1.8	0
198	Effects of a carbon monoxide-releasing molecule on postischemic cardiac recovery. Journal of Molecular and Cellular Cardiology, 2006, 40, 963.	0.9	0

#	Article	IF	Citations
199	Carbon Monoxide Generated by Heme Oxygenase-1 Activity Confers Tolerogenic Capacity to Dendritic Cells. Clinical Immunology, 2007, 123, S181.	1.4	0
200	Carbon Monoxide-Releasing Molecule (CORM-3) Prevents And Reverses Experimental Pulmonary Hypertension. , 2011, , .		0
201	Heme Oxygenase in Skeletal Muscle. , 2002, , 205-213.		0
202	Heme Oxygenase and the Novel Tumour-Specific Anti-Vascular Compound Combretastatin A4-Phosphate. , 2002, , 303-312.		0
203	Vasorelaxant properties of CORM-3, a new water-soluble carbon monoxide-releasing molecule. BMC News and Views, 2003, 3, .	0.0	0
204	Heme Oxygenase 1-Induced Resistance to Imatinib In Chronic Myelogenous Leukemia Cells. Blood, 2011, 118, 4410-4410.	0.6	0
205	Study of Dense Red Blood Cells in Children with Sickle Cell Disease. Blood, 2016, 128, 4870-4870.	0.6	0