

Paul W Buehler

List of Publications by Year in descending order

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Version: 2024-02-01

72
papers

3,780
citations

159585

30
h-index

128289

60
g-index

74
all docs

74
docs citations

74
times ranked

3968
citing authors

#	ARTICLE	IF	CITATIONS
1	Hemolysis and free hemoglobin revisited: exploring hemoglobin and hemin scavengers as a novel class of therapeutic proteins. <i>Blood</i> , 2013, 121, 1276-1284.	1.4	582
2	CD163 is the macrophage scavenger receptor for native and chemically modified hemoglobins in the absence of haptoglobin. <i>Blood</i> , 2006, 107, 373-380.	1.4	248
3	Hemoglobin-driven pathophysiology is an in vivo consequence of the red blood cell storage lesion that can be attenuated in guinea pigs by haptoglobin therapy. <i>Journal of Clinical Investigation</i> , 2012, 122, 1444-1458.	8.2	247
4	Haptoglobin, hemopexin, and related defense pathways—basic science, clinical perspectives, and drug development. <i>Frontiers in Physiology</i> , 2014, 5, 415.	2.8	204
5	Evidence of Structural Protein Damage and Membrane Lipid Remodeling in Red Blood Cells from COVID-19 Patients. <i>Journal of Proteome Research</i> , 2020, 19, 4455-4469.	3.7	189
6	Haptoglobin preserves the CD163 hemoglobin scavenger pathway by shielding hemoglobin from peroxidative modification. <i>Blood</i> , 2009, 113, 2578-2586.	1.4	169
7	Sequestration of extracellular hemoglobin within a haptoglobin complex decreases its hypertensive and oxidative effects in dogs and guinea pigs. <i>Journal of Clinical Investigation</i> , 2009, 119, 2271-80.	8.2	156
8	Structural Basis of Peroxide-mediated Changes in Human Hemoglobin. <i>Journal of Biological Chemistry</i> , 2007, 282, 4894-4907.	3.4	134
9	Hemoglobin-based oxygen carriers: from mechanisms of toxicity and clearance to rational drug design. <i>Trends in Molecular Medicine</i> , 2010, 16, 447-457.	6.7	127
10	Toxicological Consequences of Extracellular Hemoglobin: Biochemical and Physiological Perspectives. <i>Antioxidants and Redox Signaling</i> , 2010, 12, 275-291.	5.4	88
11	Effects of Endogenous Ascorbate on Oxidation, Oxygenation, and Toxicokinetics of Cell-Free Modified Hemoglobin after Exchange Transfusion in Rat and Guinea Pig. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2007, 323, 49-60.	2.5	86
12	Extracellular Vesicles from Red Blood Cells and Their Evolving Roles in Health, Coagulopathy and Therapy. <i>International Journal of Molecular Sciences</i> , 2021, 22, 153.	4.1	77
13	Coagulopathy and Thrombosis as a Result of Severe COVID-19 Infection: A Microvascular Focus. <i>Thrombosis and Haemostasis</i> , 2020, 120, 1668-1679.	3.4	75
14	Haptoglobin Preserves Vascular Nitric Oxide Signaling during Hemolysis. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2016, 193, 1111-1122.	5.6	73
15	Structural and Functional Characterization of Glutaraldehyde-Polymerized Bovine Hemoglobin and Its Isolated Fractions. <i>Analytical Chemistry</i> , 2005, 77, 3466-3478.	6.5	72
16	Quantitative Mass Spectrometry Defines an Oxidative Hotspot in Hemoglobin that is Specifically Protected by Haptoglobin. <i>Journal of Proteome Research</i> , 2010, 9, 4061-4070.	3.7	67
17	Different target specificities of haptoglobin and hemopexin define a sequential protection system against vascular hemoglobin toxicity. <i>Free Radical Biology and Medicine</i> , 2015, 89, 931-943.	2.9	59
18	Haptoglobin Therapeutics and Compartmentalization of Cell-Free Hemoglobin Toxicity. <i>Trends in Molecular Medicine</i> , 2020, 26, 683-697.	6.7	58

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19	Haptoglobin administration into the subarachnoid space prevents hemoglobin-induced cerebral vasospasm. <i>Journal of Clinical Investigation</i> , 2019, 129, 5219-5235.	8.2	57
20	All hemoglobin-based oxygen carriers are not created equally. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2008, 1784, 1378-1381.	2.3	54
21	Hemoglobin-induced lung vascular oxidation, inflammation, and remodeling contribute to the progression of hypoxic pulmonary hypertension and is attenuated in rats with repeated-dose haptoglobin administration. <i>Free Radical Biology and Medicine</i> , 2015, 82, 50-62.	2.9	50
22	Reversal of hemochromatosis by apotransferrin in non-transfused and transfused Hbbth3/+ (heterozygous b1/b2 globin gene deletion) mice. <i>Haematologica</i> , 2015, 100, 611-622.	3.5	48
23	Red blood cell metabolism in Rhesus macaques and humans: comparative biology of blood storage. <i>Haematologica</i> , 2020, 105, 2174-2186.	3.5	46
24	Free hemoglobin induction of pulmonary vascular disease: evidence for an inflammatory mechanism. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2012, 303, L312-L326.	2.9	45
25	Revisiting the putative role of heme as a trigger of inflammation. <i>Pharmacology Research and Perspectives</i> , 2018, 6, e00392.	2.4	44
26	Redox Biology of Blood Revisited: The Role of Red Blood Cells in Maintaining Circulatory Reductive Capacity. <i>Antioxidants and Redox Signaling</i> , 2005, 7, 1755-1760.	5.4	43
27	Structural Stabilization in Tetrameric or Polymeric Hemoglobin Determines Its Interaction with Endogenous Antioxidant Scavenger Pathways. <i>Antioxidants and Redox Signaling</i> , 2008, 10, 1449-1462.	5.4	43
28	Biological and Clinical Factors Contributing to the Metabolic Heterogeneity of Hospitalized Patients with and without COVID-19. <i>Cells</i> , 2021, 10, 2293.	4.1	37
29	Synthesis, biophysical properties and pharmacokinetics of ultrahigh molecular weight tense and relaxed state polymerized bovine hemoglobins. <i>Biomaterials</i> , 2010, 31, 3723-3735.	11.4	35
30	Blood Aging, Safety, and Transfusion: Capturing the "Radical" Menace. <i>Antioxidants and Redox Signaling</i> , 2011, 14, 1713-1728.	5.4	35
31	Depletion of haptoglobin and hemopexin promote hemoglobin-mediated lipoprotein oxidation in sickle cell disease. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2018, 315, L765-L774.	2.9	34
32	A mechanistic investigation of thrombotic microangiopathy associated with IV abuse of Opana ER. <i>Blood</i> , 2017, 129, 896-905.	1.4	30
33	Sodium nitrite potentiates renal oxidative stress and injury in hemoglobin exposed guinea pigs. <i>Toxicology</i> , 2015, 333, 89-99.	4.2	26
34	Fatty acid desaturase activity in mature red blood cells and implications for blood storage quality. <i>Transfusion</i> , 2021, 61, 1867-1883.	1.6	26
35	Oxygen Sensing in the Circulation: "Cross Talk" Between Red Blood Cells and the Vasculature. <i>Antioxidants and Redox Signaling</i> , 2004, 6, 1000-1010.	5.4	25
36	The quaternary state of polymerized human hemoglobin regulates oxygenation of breast cancer solid tumors: A theoretical and experimental study. <i>PLoS ONE</i> , 2018, 13, e0191275.	2.5	24

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37	Iron accelerates hemoglobin oxidation increasing mortality in vascular diseased guinea pigs following transfusion of stored blood. JCI Insight, 2017, 2, .	5.0	22
38	Modeling hemoglobin and hemoglobin:haptoglobin complex clearance in a non-rodent species—pharmacokinetic and therapeutic implications. Frontiers in Physiology, 2014, 5, 385.	2.8	20
39	Chemical Characterization of Diaspirin Cross-Linked Hemoglobin Polymerized with Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overloc 6.5 19		
40	Transcriptional Suppression of Renal Antioxidant Enzyme Systems in Guinea Pigs Exposed to Polymerized Cell-Free Hemoglobin. Toxics, 2016, 4, 6.	3.7	19
41	ZOOMICS: Comparative Metabolomics of Red Blood Cells From Old World Monkeys and Humans. Frontiers in Physiology, 2020, 11, 593841.	2.8	19
42	Extracellular Hb Enhances Cardiac Toxicity in Endotoxemic Guinea Pigs: Protective Role of Haptoglobin. Toxins, 2014, 6, 1244-1259.	3.4	18
43	Spin trapping combined with quantitative mass spectrometry defines free radical redistribution within the oxidized hemoglobin:haptoglobin complex. Free Radical Biology and Medicine, 2015, 85, 259-268.	2.9	18
44	Phenotype-specific recombinant haptoglobin polymers co-expressed with C1r-like protein as optimized hemoglobin-binding therapeutics. BMC Biotechnology, 2018, 18, 15.	3.3	18
45	An Hb-mediated circulating macrophage contributing to pulmonary vascular remodeling in sickle cell disease. JCI Insight, 2019, 4, .	5.0	17
46	Novel manufacturing method for producing apohemoglobin and its biophysical properties. Biotechnology and Bioengineering, 2020, 117, 125-145.	3.3	14
47	Evaluation of renal oxygen homeostasis in a preclinical animal model to elucidate difference in blood quality after transfusion. Transfusion, 2018, 58, 1474-1485.	1.6	13
48	Apo-hemoglobin-haptoglobin complex attenuates the pathobiology of circulating acellular hemoglobin and heme. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 318, H1296-H1307.	3.2	12
49	Effects of living at moderate altitude on pulmonary vascular function and exercise capacity in mice with sickle cell anaemia. Journal of Physiology, 2019, 597, 1073-1085.	2.9	11
50	Murine models of sickle cell disease and beta-thalassemia demonstrate pulmonary hypertension with distinctive features. Pulmonary Circulation, 2021, 11, 1-12.	1.7	11
51	Impact of cell-free hemoglobin on contracting skeletal muscle microvascular oxygen pressure dynamics. Nitric Oxide - Biology and Chemistry, 2018, 76, 29-36.	2.7	10
52	Hemopexin dosing improves cardiopulmonary dysfunction in murine sickle cell disease. Free Radical Biology and Medicine, 2021, 175, 95-107.	2.9	10
53	Hemoglobin induced cell trauma indirectly influences endothelial TLR9 activity resulting in pulmonary vascular smooth muscle cell activation. PLoS ONE, 2017, 12, e0171219.	2.5	10
54	Renal Toxicodynamic Effects of Extracellular Hemoglobin After Acute Exposure. Toxicological Sciences, 2018, 166, 180-191.	3.1	9

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55	The effect of dietary nitrate supplementation on the speed-duration relationship in mice with sickle cell disease. <i>Journal of Applied Physiology</i> , 2020, 129, 474-482.	2.5	9
56	Sodium nitrite induces acute central nervous system toxicity in guinea pigs exposed to systemic cell-free hemoglobin. <i>Biochemical and Biophysical Research Communications</i> , 2011, 409, 412-417.	2.1	8
57	Modular Platform for the Development of Recombinant Hemoglobin Scavenger Biotherapeutics. <i>Molecular Pharmaceutics</i> , 2021, 18, 3158-3170.	4.6	7
58	The Impact of Age and BMI on the VWF/ADAMTS13 Axis and Simultaneous Thrombin and Plasmin Generation in Hospitalized COVID-19 Patients. <i>Frontiers in Medicine</i> , 2021, 8, 817305.	2.6	7
59	Deuterated Linoleic Acid Attenuates the RBC Storage Lesion in a Mouse Model of Poor RBC Storage. <i>Frontiers in Physiology</i> , 2022, 13, 868578.	2.8	7
60	Integrative Proteome and Transcriptome Analysis of Extramedullary Erythropoiesis and Its Reversal by Transferrin Treatment in a Mouse Model of Beta-Thalassemia. <i>Journal of Proteome Research</i> , 2015, 14, 1089-1100.	3.7	6
61	Electron paramagnetic resonance oximetry as a novel approach to monitor the effectiveness and quality of red blood cell transfusions. <i>Blood Transfusion</i> , 2019, 17, 296-306.	0.4	6
62	ZOOMICS: Comparative Metabolomics of Red Blood Cells From Guinea Pigs, Humans, and Non-human Primates During Refrigerated Storage for Up to 42 Days. <i>Frontiers in Physiology</i> , 2022, 13, 845347.	2.8	6
63	Ferroportin inhibition attenuates plasma iron, oxidant stress, and renal injury following red blood cell transfusion in guinea pigs. <i>Transfusion</i> , 2020, 60, 513-523.	1.6	5
64	In vitro effects of emicizumab on activated clotting time in blood samples from cardiac surgical patients. <i>Haemophilia</i> , 2022, 28, 183-190.	2.1	4
65	Polyethylene Oxide Molecular Size Determines the Severity of Atypical Thrombotic Microangiopathy in a Guinea Pig Model of Acute Intravenous Exposure. <i>Toxicological Sciences</i> , 2020, 177, 235-247.	3.1	3
66	A Pharmacokinetic and Plasmin-Generation Pharmacodynamic Assessment of a Tranexamic Acid Regimen Designed for Cardiac Surgery With Cardiopulmonary Bypass. <i>Journal of Cardiothoracic and Vascular Anesthesia</i> , 2021, , .	1.3	3
67	Agonistic Anti-CD40 Antibody Triggers an Acute Liver Crisis With Systemic Inflammation in Humanized Sickle Cell Disease Mice. <i>Frontiers in Immunology</i> , 2021, 12, 627944.	4.8	1
68	Evidence supporting a role for circulating macrophages in the regression of vascular remodeling following subacute chronic exposure to hemoglobin plus hypoxia. <i>Pulmonary Circulation</i> , 2021, 11, 1-11.	1.7	1
69	Front Cover Image, Volume 117, Number 1, January 2020. <i>Biotechnology and Bioengineering</i> , 2020, 117, i.	3.3	0
70	Measurement of Tissue Oxygen as a Novel Approach to Optimizing Red Blood Cell Quality Assessment. <i>Advances in Experimental Medicine and Biology</i> , 2021, 1269, 379-386.	1.6	0
71	Expanding EPR Oximetry into Transfusion Medicine. <i>Applied Magnetic Resonance</i> , 2021, 52, 1509-1519.	1.2	0
72	Low dose chronically infused hemoglobin induces pulmonary hypertension or exacerbates hypoxia-induced pulmonary hypertension. <i>FASEB Journal</i> , 2010, 24, 1b541.	0.5	0