

Karen Bieback

List of Publications by Year in descending order

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110
papers

10,225
citations

87888

38
h-index

33894

99
g-index

118
all docs

118
docs citations

118
times ranked

13814
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparative Analysis of Mesenchymal Stem Cells from Bone Marrow, Umbilical Cord Blood, or Adipose Tissue. <i>Stem Cells</i> , 2006, 24, 1294-1301.	3.2	2,851
2	Critical Parameters for the Isolation of Mesenchymal Stem Cells from Umbilical Cord Blood. <i>Stem Cells</i> , 2004, 22, 625-634.	3.2	796
3	Hemagglutinin Protein of Wild-Type Measles Virus Activates Toll-Like Receptor 2 Signaling. <i>Journal of Virology</i> , 2002, 76, 8729-8736.	3.4	435
4	Human Alternatives to Fetal Bovine Serum for the Expansion of Mesenchymal Stromal Cells from Bone Marrow. <i>Stem Cells</i> , 2009, 27, 2331-2341.	3.2	420
5	Human AB Serum and Thrombin-Activated Platelet-Rich Plasma Are Suitable Alternatives to Fetal Calf Serum for the Expansion of Mesenchymal Stem Cells from Adipose Tissue. <i>Stem Cells</i> , 2007, 25, 1270-1278.	3.2	390
6	Stem cell migration and mechanotransduction on linear stiffness gradient hydrogels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5647-5652.	7.1	370
7	Suppression of antitumor T cell immunity by the oncometabolite (R)-2-hydroxyglutarate. <i>Nature Medicine</i> , 2018, 24, 1192-1203.	30.7	359
8	Intravascular Mesenchymal Stromal/Stem Cell Therapy Product Diversification: Time for New Clinical Guidelines. <i>Trends in Molecular Medicine</i> , 2019, 25, 149-163.	6.7	288
9	Is the intravascular administration of mesenchymal stem cells safe?. <i>Microvascular Research</i> , 2009, 77, 370-376.	2.5	285
10	Fetal bovine serum (FBS): Past “ present “ future. <i>ALTEX: Alternatives To Animal Experimentation</i> , 2018, 35, 99-118.	1.5	231
11	Comparing the Immunomodulatory Properties of Bone Marrow, Adipose Tissue, and Birth-Associated Tissue Mesenchymal Stromal Cells. <i>Frontiers in Immunology</i> , 2015, 6, 560.	4.8	221
12	Platelet Lysate as Replacement for Fetal Bovine Serum in Mesenchymal Stromal Cell Cultures. <i>Transfusion Medicine and Hemotherapy</i> , 2013, 40, 326-335.	1.6	173
13	Cryopreserved or Fresh Mesenchymal Stromal Cells: Only a Matter of Taste or Key to Unleash the Full Clinical Potential of MSC Therapy?. <i>Advances in Experimental Medicine and Biology</i> , 2016, 951, 77-98.	1.6	141
14	Mesenchymal Stromal Cells from Umbilical Cord Blood. <i>Current Stem Cell Research and Therapy</i> , 2007, 2, 310-323.	1.3	135
15	Cell Origin of Human Mesenchymal Stem Cells Determines a Different Healing Performance in Cardiac Regeneration. <i>PLoS ONE</i> , 2011, 6, e15652.	2.5	121
16	Standardization of Good Manufacturing Practice“compliant production of bone marrow“derived human mesenchymal stromal cells for immunotherapeutic applications. <i>Cytotherapy</i> , 2015, 17, 128-139.	0.7	118
17	Hepatitis A Virus-Specific Immunoglobulin A Mediates Infection of Hepatocytes with Hepatitis A Virus via the Asialoglycoprotein Receptor. <i>Journal of Virology</i> , 2000, 74, 10950-10957.	3.4	102
18	Mesenchymal stromal cells from human perinatal tissues: From biology to cell therapy. <i>World Journal of Stem Cells</i> , 2010, 2, 81.	2.8	100

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19	Mesenchymal stem cells and cardiac repair. <i>Journal of Cellular and Molecular Medicine</i> , 2008, 12, 1795-1810.	3.6	99
20	A robust potency assay highlights significant donor variation of human mesenchymal stem/progenitor cell immune modulatory capacity and extended radio-resistance. <i>Stem Cell Research and Therapy</i> , 2015, 6, 236.	5.5	97
21	Stem cell proteomes: A profile of human mesenchymal stem cells derived from umbilical cord blood. <i>Electrophoresis</i> , 2005, 26, 2749-2758.	2.4	92
22	Hypoxic Preconditioning Increases Survival and Pro-Angiogenic Capacity of Human Cord Blood Mesenchymal Stromal Cells In Vitro. <i>PLoS ONE</i> , 2015, 10, e0138477.	2.5	88
23	Replicative aging and differentiation potential of human adipose tissue-derived mesenchymal stromal cells expanded in pooled human or fetal bovine serum. <i>Cytotherapy</i> , 2012, 14, 570-583.	0.7	82
24	Comparing mesenchymal stromal cells from different human tissues: bone marrow, adipose tissue and umbilical cord blood. <i>Bio-Medical Materials and Engineering</i> , 2008, 18, S71-6.	0.6	75
25	Retinal pigment epithelial phenotype induced in human adipose tissue-derived mesenchymal stromal cells. <i>Cytotherapy</i> , 2009, 11, 177-188.	0.7	71
26	Altered Gene Expression in Human Adipose Stem Cells Cultured with Fetal Bovine Serum Compared to Human Supplements. <i>Tissue Engineering - Part A</i> , 2010, 16, 3467-3484.	3.1	68
27	Clinical Protocols for the Isolation and Expansion of Mesenchymal Stromal Cells. <i>Transfusion Medicine and Hemotherapy</i> , 2008, 35, 4-4.	1.6	66
28	3D models of the hematopoietic stem cell niche under steady-state and active conditions. <i>Scientific Reports</i> , 2017, 7, 4625.	3.3	66
29	Extracellular Vesicles Secreted by Bone Marrow- and Adipose Tissue-Derived Mesenchymal Stromal Cells Fail to Suppress Lymphocyte Proliferation. <i>Stem Cells and Development</i> , 2015, 24, 1374-1376.	2.1	60
30	Integrin expression in stem cells from bone marrow and adipose tissue during chondrogenic differentiation. <i>International Journal of Molecular Medicine</i> , 2008, 21, 271-9.	4.0	58
31	Gaps in the knowledge of human platelet lysate as a cell culture supplement for cell therapy: a joint publication from the AABB and the International Society for Cell & Gene Therapy. <i>Transfusion</i> , 2019, 59, 3448-3460.	1.6	57
32	Mesenchymal stromal/stem cells as potential therapy in diabetic retinopathy. <i>Immunobiology</i> , 2018, 223, 729-743.	1.9	56
33	Estradiol protection against toxic effects of catecholamine on electrical properties in human-induced pluripotent stem cell derived cardiomyocytes. <i>International Journal of Cardiology</i> , 2018, 254, 195-202.	1.7	55
34	Quantitation of progenitor cell populations and growth factors after bone marrow aspirate concentration. <i>Journal of Translational Medicine</i> , 2019, 17, 115.	4.4	54
35	Evaluation of the effects of different culture media on the myogenic differentiation potential of adipose tissue- or bone marrow-derived human mesenchymal stem cells. <i>International Journal of Molecular Medicine</i> , 2014, 33, 160-170.	4.0	52
36	Mesenchymal stromal cells (MSCs): science and f(r)iction. <i>Journal of Molecular Medicine</i> , 2012, 90, 773-782.	3.9	51

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37	Translating Research into Clinical Scale Manufacturing of Mesenchymal Stromal Cells. <i>Stem Cells International</i> , 2010, 2010, 1-11.	2.5	48
38	miR-10a-5p and miR-29b-3p as Extracellular Vesicle-Associated Prostate Cancer Detection Markers. <i>Cancers</i> , 2020, 12, 43.	3.7	46
39	Stem/Stromal Cells for Treatment of Kidney Injuries With Focus on Preclinical Models. <i>Frontiers in Medicine</i> , 2018, 5, 179.	2.6	45
40	Gaps in the knowledge of human platelet lysate as a cell culture supplement for cell therapy: a joint publication from the AABB and the International Society for Cell & Gene Therapy. <i>Cytotherapy</i> , 2019, 21, 911-924.	0.7	42
41	Paracrine effects of uterine leucocytes on gene expression of human uterine stromal fibroblasts. <i>Molecular Human Reproduction</i> , 2009, 15, 39-48.	2.8	41
42	Ion Channel Dysfunctions in Dilated Cardiomyopathy in Limb-Girdle Muscular Dystrophy. <i>Circulation Genomic and Precision Medicine</i> , 2018, 11, e001893.	3.6	40
43	Human Umbilical Cord Blood Mononuclear Cells in a Double-Hit Model of Bronchopulmonary Dysplasia in Neonatal Mice. <i>PLoS ONE</i> , 2013, 8, e74740.	2.5	37
44	Soft Hydrogels for Balancing Cell Proliferation and Differentiation. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 4687-4701.	5.2	37
45	Lipoaspirate-derived adult mesenchymal stem cells improve functional outcome during intracerebral hemorrhage by proliferation of endogenous progenitor cells. <i>Neuroscience Letters</i> , 2008, 443, 174-178.	2.1	36
46	TGF- β 1, but Not Bone Morphogenetic Proteins, Activates Smad1/5 Pathway in Primary Human Macrophages and Induces Expression of Proatherogenic Genes. <i>Journal of Immunology</i> , 2015, 194, 709-718.	0.8	36
47	In vitro analysis of integrin expression during chondrogenic differentiation of mesenchymal stem cells and chondrocytes upon dedifferentiation in cell culture. <i>International Journal of Molecular Medicine</i> , 2006, 17, 301-7.	4.0	36
48	ELMO1 protects renal structure and ultrafiltration in kidney development and under diabetic conditions. <i>Scientific Reports</i> , 2016, 6, 37172.	3.3	34
49	In-vitro analysis of the expression of TGFbeta -superfamily-members during chondrogenic differentiation of mesenchymal stem cells and chondrocytes during dedifferentiation in cell culture. <i>Cellular and Molecular Biology Letters</i> , 2005, 10, 345-62.	7.0	34
50	Monitoring human mesenchymal stromal cell differentiation by electrochemical impedance sensing. <i>Cytotherapy</i> , 2011, 13, 1074-1089.	0.7	33
51	A Subpopulation of Stromal Cells Controls Cancer Cell Homing to the Bone Marrow. <i>Cancer Research</i> , 2018, 78, 129-142.	0.9	32
52	Recruitment of human cord blood-derived endothelial colony-forming cells to sites of tumor angiogenesis. <i>Cytotherapy</i> , 2013, 15, 726-739.	0.7	31
53	Isolation, Culture, and Characterization of Human Umbilical Cord Blood-Derived Mesenchymal Stromal Cells. <i>Methods in Molecular Biology</i> , 2016, 1416, 245-258.	0.9	30
54	Human Adipose Tissue-Derived Stromal Cells Suppress Human, but Not Murine Lymphocyte Proliferation, via Indoleamine 2,3-Dioxygenase Activity. <i>Cells</i> , 2020, 9, 2419.	4.1	30

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55	Inter-Laboratory Comparison of Extracellular Vesicle Isolation Based on Ultracentrifugation. <i>Transfusion Medicine and Hemotherapy</i> , 2021, 48, 48-59.	1.6	30
56	Expression of collagen and fiber-associated proteins in human septal cartilage during in vitro dedifferentiation. <i>International Journal of Molecular Medicine</i> , 2004, 14, 1015-22.	4.0	30
57	Regulation of gene expression in lymphocytes and antigen-presenting cells by measles virus: consequences for immunomodulation. <i>Journal of Molecular Medicine</i> , 2002, 80, 73-85.	3.9	29
58	Cultivation in Human Serum Reduces Adipose Tissue-Derived Mesenchymal Stromal Cell Adhesion to Laminin and Endothelium and Reduces Capillary Entrapment. <i>Stem Cells and Development</i> , 2013, 22, 791-803.	2.1	29
59	Evaluation of GMP-compliant culture media for in vitro expansion of human bone marrow mesenchymal stromal cells. <i>Experimental Hematology</i> , 2016, 44, 508-518.	0.4	28
60	Human mesenchymal stromal cells inhibit platelet activation and aggregation involving CD73-converted adenosine. <i>Stem Cell Research and Therapy</i> , 2018, 9, 184.	5.5	28
61	Adipose-derived mesenchymal stromal cells reverse high glucose-induced reduction of angiogenesis in human retinal microvascular endothelial cells. <i>Cytotherapy</i> , 2020, 22, 261-275.	0.7	28
62	Intravitreal injection of mesenchymal stem cells evokes retinal vascular damage in rats. <i>FASEB Journal</i> , 2019, 33, 14668-14679.	0.5	27
63	The Formation of Extracellular Matrix During Chondrogenic Differentiation of Mesenchymal Stem Cells Correlates with Increased Levels of Xylosyltransferase I. <i>Stem Cells</i> , 2006, 24, 2252-2261.	3.2	26
64	Biased signalling is an essential feature of TLR4 in glioma cells. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2016, 1863, 3084-3095.	4.1	25
65	Indoleamine 2,3-dioxygenase mediates inhibition of virus-specific CD8+ T cell proliferation by human mesenchymal stromal cells. <i>Cytotherapy</i> , 2016, 18, 621-629.	0.7	24
66	Recent advances in understanding mesenchymal stromal cells. <i>F1000Research</i> , 2020, 9, 156.	1.6	22
67	The influence of polymer scaffolds on cellular behaviour of bone marrow derived human mesenchymal stem cells. <i>Clinical Hemorheology and Microcirculation</i> , 2012, 52, 357-373.	1.7	21
68	Human Adipose Tissue-Derived Mesenchymal Stromal Cells Inhibit CD4+ T Cell Proliferation and Induce Regulatory T Cells as Well as CD127 Expression on CD4+CD25+ T Cells. <i>Cells</i> , 2021, 10, 58.	4.1	21
69	Potential of electrospun cationic BSA fibers to guide osteogenic MSC differentiation via surface charge and fibrous topography. <i>Scientific Reports</i> , 2019, 9, 20003.	3.3	21
70	Production and quality testing of multipotent mesenchymal stromal cell therapeutics for clinical use. <i>Transfusion</i> , 2019, 59, 2164-2173.	1.6	20
71	A Single-Tube Real-Time PCR Assay for Mycoplasma Detection as a Routine Quality Control of Cell Therapeutics. <i>Transfusion Medicine and Hemotherapy</i> , 2014, 41, 83-89.	1.6	19
72	Expansion of human T cells in vitro is differentially regulated by the measles virus glycoproteins. <i>Journal of General Virology</i> , 2003, 84, 1179-1188.	2.9	18

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73	Mechanisms of paracrine cardioprotection by cord blood mesenchymal stromal cells. <i>European Journal of Cardio-thoracic Surgery</i> , 2014, 45, 983-992.	1.4	18
74	The effect of adipose tissue-derived stem cells in a middle cerebral artery occlusion stroke model depends on their engraftment rate. <i>Stem Cell Research and Therapy</i> , 2017, 8, 96.	5.5	18
75	Monitoring matrix remodeling in the cellular microenvironment using microrheology for complex cellular systems. <i>Acta Biomaterialia</i> , 2020, 111, 254-266.	8.3	18
76	Human chondrocytes differentially express matrix modulators during in vitro expansion for tissue engineering. <i>International Journal of Molecular Medicine</i> , 2005, 16, 509-15.	4.0	18
77	Induction of retinal pigment epithelium properties in ciliary margin progenitor cells. <i>Clinical and Experimental Ophthalmology</i> , 2008, 36, 358-366.	2.6	17
78	The Blood Bag Plasticizer Di-2-Ethylhexylphthalate Causes Red Blood Cells to Form Stomatocytes, Possibly by Inducing Lipid Flip-Flop. <i>Transfusion Medicine and Hemotherapy</i> , 2018, 45, 413-422.	1.6	17
79	<i>In vitro</i> analysis of integrin expression in stem cells from bone marrow and cord blood during chondrogenic differentiation. <i>Journal of Cellular and Molecular Medicine</i> , 2009, 13, 1175-1184.	3.6	15
80	In vitro analysis of matrix proteins and growth factors in dedifferentiating human chondrocytes for tissue-engineered cartilage. <i>Acta Oto-Laryngologica</i> , 2005, 125, 647-653.	0.9	14
81	Differential modulation of integrin expression in chondrocytes during expansion for tissue engineering. <i>In Vivo</i> , 2005, 19, 501-7.	1.3	14
82	Cord Blood Mesenchymal Stromal Cell-Conditioned Medium Protects Endothelial Cells via STAT3 Signaling. <i>Cellular Physiology and Biochemistry</i> , 2014, 34, 646-657.	1.6	12
83	Biomimetic 3D in vitro model of biofilm triggered osteomyelitis for investigating hematopoiesis during bone marrow infections. <i>Acta Biomaterialia</i> , 2018, 73, 250-262.	8.3	12
84	Pooled thrombin-activated platelet-rich plasma: a substitute for fetal bovine serum in the engineering of osteogenic/vasculogenic grafts. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2017, 11, 1542-1552.	2.7	11
85	Pro-angiogenic Activity Discriminates Human Adipose-Derived Stromal Cells From Retinal Pericytes: Considerations for Cell-Based Therapy of Diabetic Retinopathy. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 387.	3.7	11
86	Alpha 1-adrenoceptor signalling contributes to toxic effects of catecholamine on electrical properties in cardiomyocytes. <i>Europace</i> , 2021, 23, 1137-1148.	1.7	11
87	Modulating endothelial adhesion and migration impacts stem cell therapies efficacy. <i>EBioMedicine</i> , 2020, 60, 102987.	6.1	10
88	Bioreactor for mobilization of mesenchymal stem/stromal cells into scaffolds under mechanical stimulation: Preliminary results. <i>PLoS ONE</i> , 2020, 15, e0227553.	2.5	10
89	Flow morphometry to assess the red blood cell storage lesion. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2017, 91, 874-882.	1.5	9
90	Intraoperative radiotherapy for breast cancer treatment efficiently targets the tumor bed preventing breast adipose stromal cell outgrowth. <i>Strahlentherapie Und Onkologie</i> , 2020, 196, 398-404.	2.0	9

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91	Megakaryocytes and platelets express nicotinic acetylcholine receptors but nicotine does not affect megakaryopoiesis or platelet function. <i>Platelets</i> , 2016, 27, 43-50.	2.3	8
92	Junctional Adhesion Molecule-C Mediates the Recruitment of Embryonic-Endothelial Progenitor Cells to the Perivascular Niche during Tumor Angiogenesis. <i>International Journal of Molecular Sciences</i> , 2020, 21, 1209.	4.1	8
93	Wound Fluid from Breast Cancer Patients Undergoing Intraoperative Radiotherapy Exhibits an Altered Cytokine Profile and Impairs Mesenchymal Stromal Cell Function. <i>Cancers</i> , 2021, 13, 2140.	3.7	8
94	Hemolysis Pathways during Storage of Erythrocytes and Inter-Donor Variability in Erythrocyte Morphology. <i>Transfusion Medicine and Hemotherapy</i> , 2021, 48, 39-47.	1.6	7
95	Polycomb Protein BMI1 Regulates Osteogenic Differentiation of Human Adipose Tissue-Derived Mesenchymal Stem Cells Downstream of GSK3. <i>Stem Cells and Development</i> , 2016, 25, 922-933.	2.1	6
96	Basic Biology of Mesenchymal Stem Cells. <i>Transfusion Medicine and Hemotherapy</i> , 2008, 35, 151-152.	1.6	5
97	Platelet-rich plasma and stromal vascular fraction cells for the engineering of axially vascularized osteogenic grafts. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2020, 14, 1908-1917.	2.7	5
98	Lipid ratios as a marker for red blood cell storage quality and as a possible explanation for donor gender differences in storage quality. <i>Vox Sanguinis</i> , 2020, 115, 655-663.	1.5	5
99	Characterization of mesenchymal stem or stromal cells: tissue sources, heterogeneity, and function. <i>Transfusion</i> , 2016, 56, 2S-5S.	1.6	4
100	Effects of ASC Application on Endplate Regeneration Upon Glycerol-Induced Muscle Damage. <i>Frontiers in Molecular Neuroscience</i> , 2020, 13, 107.	2.9	4
101	Dopamine D1/D5 Receptor Signaling Is Involved in Arrhythmogenesis in the Setting of Takotsubo Cardiomyopathy. <i>Frontiers in Cardiovascular Medicine</i> , 2021, 8, 777463.	2.4	4
102	Cultivation and differentiation characteristics of human limbal progenitor cells. <i>Tissue and Cell</i> , 2008, 40, 83-88.	2.2	3
103	The Impact of Harvesting Systems and Donor Characteristics on Viability of Nucleated Cells in Adipose Tissue. <i>Journal of Craniofacial Surgery</i> , 2019, 30, 716-720.	0.7	3
104	Noninferior Red Cell Concentrate Quality after Repeated Air Rescue Mission Transport for Prehospital Transfusion. <i>Transfusion Medicine and Hemotherapy</i> , 2022, 49, 172-179.	1.6	3
105	Folate receptor mediated genetic modification of human mesenchymal stem cells via folic acid-polyethylenimine-grafted poly(N-3-hydroxypropyl)aspartamide. <i>Clinical Hemorheology and Microcirculation</i> , 2017, 67, 279-295.	1.7	2
106	Compression Bioreactor-Based Mechanical Loading Induces Mobilization of Human Bone Marrow-Derived Mesenchymal Stromal Cells into Collagen Scaffolds In Vitro. <i>International Journal of Molecular Sciences</i> , 2020, 21, 8249.	4.1	2
107	Expression of ADP receptor P2Y ₁₂ , thromboxane A ₂ receptor and C-type lectin-like receptor 2 in cord blood-derived megakaryopoiesis. <i>Platelets</i> , 2021, 32, 618-625.	2.3	2
108	Editorial: Current Progress in Mesenchymal Stem/Stromal Cell Research. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 658903.	3.7	2

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109	Potential Therapeutic Effects of Long-Term Stem Cell Administration: Impact on the Gene Profile and Kidney Function of PKD/Mhm (Cy/+) Rats. <i>Journal of Clinical Medicine</i> , 2022, 11, 2601.	2.4	2
110	Expression of Inflammation-related Intercellular Adhesion Molecules in Cardiomyocytes In Vitro and Modulation by Pro-inflammatory Agents. <i>In Vivo</i> , 2016, 30, 213-7.	1.3	1