Toh, Wei Seong

List of Publications by Year
in descending order

82 papers	13,261 citations	87888 38 h-index	66911 78 g-index
84 all docs	84 docs citations	84 times ranked	17717 citing authors

#	Article	IF	Citations
1	Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. Journal of Extracellular Vesicles, 2018, 7, 1535750.	12.2	6,961
2	MSC exosomes mediate cartilage repair by enhancing proliferation, attenuating apoptosis and modulating immune reactivity. Biomaterials, 2018, 156, 16-27.	11.4	606
3	Exosomes derived from human embryonic mesenchymal stem cells promote osteochondral regeneration. Osteoarthritis and Cartilage, 2016, 24, 2135-2140.	1.3	480
4	Defining mesenchymal stromal cell (MSC)â€derived small extracellular vesicles for therapeutic applications. Journal of Extracellular Vesicles, 2019, 8, 1609206.	12.2	400
5	MSC exosome as a cell-free MSC therapy for cartilage regeneration: Implications for osteoarthritis treatment. Seminars in Cell and Developmental Biology, 2017, 67, 56-64.	5.0	351
6	MSC exosomes alleviate temporomandibular joint osteoarthritis by attenuating inflammation and restoring matrix homeostasis. Biomaterials, 2019, 200, 35-47.	11.4	329
7	Modulation of mesenchymal stem cell chondrogenesis in a tunable hyaluronic acid hydrogel microenvironment. Biomaterials, 2012, 33, 3835-3845.	11.4	261
8	MSC exosome works through a protein-based mechanism of action. Biochemical Society Transactions, 2018, 46, 843-853.	3.4	252
9	Concise Review: Developing Best-Practice Models for the Therapeutic Use of Extracellular Vesicles. Stem Cells Translational Medicine, 2017, 6, 1730-1739.	3.3	247
10	Cartilage repair using hyaluronan hydrogel-encapsulated human embryonic stem cell-derived chondrogenic cells. Biomaterials, 2010, 31, 6968-6980.	11.4	239
11	Modulation of chondrocyte functions and stiffness-dependent cartilage repair using an injectable enzymatically crosslinked hydrogelÂwith tunable mechanical properties. Biomaterials, 2014, 35, 2207-2217.	11.4	170
12	Mesenchymal stem cell exosomes enhance periodontal ligament cell functions and promote periodontal regeneration. Acta Biomaterialia, 2019, 89, 252-264.	8.3	170
13	Advances in hydrogel delivery systems for tissue regeneration. Materials Science and Engineering C, 2014, 45, 690-697.	7.3	157
14	Effects of Culture Conditions and Bone Morphogenetic Protein 2 on Extent of Chondrogenesis from Human Embryonic Stem Cells. Stem Cells, 2007, 25, 950-960.	3.2	139
15	Advances in Mesenchymal Stem Cell-based Strategies for Cartilage Repair and Regeneration. Stem Cell Reviews and Reports, 2014, 10, 686-696.	5.6	126
16	Critical considerations for the development of potency tests for therapeutic applications of mesenchymal stromal cell-derived small extracellular vesicles. Cytotherapy, 2021, 23, 373-380.	0.7	125
17	Loss of viability during freezeâ€"thaw of intact and adherent human embryonic stem cells with conventional slow-cooling protocols is predominantly due toâ£apoptosis rather than cellular necrosis. Journal of Biomedical Science, 2006, 13, 433-445.	7.0	108
18	Combined effects of TGFÎ²1 and BMP2 in serum-free chondrogenic differentiation of mesenchymal stem cells induced hyaline-like cartilage formation. Growth Factors, 2005, 23, 313-321.	1.7	100

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19	Potential of Human Embryonic Stem Cells in Cartilage Tissue Engineering and Regenerative Medicine. Stem Cell Reviews and Reports, 2011, 7, 544-559.	5.6	96
20	The effect of injectable gelatin-hydroxyphenylpropionic acid hydrogel matrices on the proliferation, migration, differentiation and oxidative stress resistance of adult neural stem cells. Biomaterials, 2012, 33, 3446-3455.	11.4	96
21	Cellular senescence in aging and osteoarthritis. Monthly Notices of the Royal Astronomical Society: Letters, 2016, 87, 6-14.	3.3	96
22	International Society for Extracellular Vesicles and International Society for Cell and Gene Therapy statement on extracellular vesicles from mesenchymal stromal cells and other cells: considerations for potential therapeutic agents to suppress coronavirus disease-19. Cytotherapy, 2020, 22, 482-485.	0.7	94
23	Mesenchymal stem cell exosomes in bone regenerative strategiesâ€"a systematic review of preclinical studies. Materials Today Bio, 2020, 7, 100067.	5.5	82
24	Osteogenic differentiation within intact human embryoid bodies result in a marked increase in osteocalcin secretion after 12 days of in vitro culture, and formation of morphologically distinct nodule-like structures. Tissue and Cell, 2005, 37, 325-334.	2.2	72
25	Differentiation and enrichment of expandable chondrogenic cells from human embryonic stem cells <i>in vitro</i>. Journal of Cellular and Molecular Medicine, 2009, 13, 3570-3590.	3.6	66
26	Depth of cure of contemporary bulk-fill resin-based composites. Dental Materials Journal, 2016, 35, 503-510.	1.8	66
27	Identification of Nephrotoxic Compounds with Embryonic Stem-Cell-Derived Human Renal Proximal Tubular-Like Cells. Molecular Pharmaceutics, 2014, 11, 1982-1990.	4.6	61
28	Biomaterial-Mediated Delivery of Microenvironmental Cues for Repair and Regeneration of Articular Cartilage. Molecular Pharmaceutics, 2011, 8, 994-1001.	4.6	60
29	Intra-Articular Injections of Mesenchymal Stem Cell Exosomes and Hyaluronic Acid Improve Structural and Mechanical Properties of Repaired Cartilage in a Rabbit Model. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2020, 36, 2215-2228.e2.	2.7	60
30	Immune regulatory targets of mesenchymal stromal cell exosomes/small extracellular vesicles in tissue regeneration. Cytotherapy, 2018, 20, 1419-1426.	0.7	59
31	Therapeutic angiogenesis by transplantation of human embryonic stem cell-derived CD133⁺ endothelial progenitor cells for cardiac repair. Regenerative Medicine, 2010, 5, 231-244.	1.7	58
32	Chemotactic recruitment of adult neural progenitor cells into multifunctional hydrogels providing sustained SDFâ€•1Î± release and compatible structural support. FASEB Journal, 2013, 27, 1023-1033.	0.5	58
33	Directing endothelial differentiation of human embryonic stem cells via transduction with an adenoviral vector expressing the VEGF165 gene. Journal of Gene Medicine, 2007, 9, 452-461.	2.8	55
34	Equivalent 10-Year Outcomes After Implantation of Autologous Bone Marrowâ€"Derived Mesenchymal Stem Cells Versus Autologous Chondrocyte Implantation for Chondral Defects of the Knee. American Journal of Sports Medicine, 2019, 47, 2881-2887.	4.2	54
35	Stage-Dependent Effect of TGF-Î²1 on Chondrogenic Differentiation of Human Embryonic Stem Cells. Stem Cells and Development, 2009, 18, 929-940.	2.1	50
36	Adipose Tissue and Extracellular Matrix Development by Injectable Decellularized Adipose Matrix Loaded with Basic Fibroblast Growth Factor. Plastic and Reconstructive Surgery, 2016, 137, 1171-1180.	1.4	50

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37	Mesenchymal Stem Cell Exosomes for Cartilage Regeneration: A Systematic Review of Preclinical <i>In Vivo</i> Studies. Tissue Engineering - Part B: Reviews, 2021, 27, 1-13.	4.8	46
38	Differentiation of Human Embryonic Stem Cells into Clinically Amenable Keratinocytes in an Autogenic Environment. Journal of Investigative Dermatology, 2013, 133, 618-628.	0.7	40
39	Establishment of Clinically Compliant Human Embryonic Stem Cells in an Autologous Feeder-Free System. Tissue Engineering - Part C: Methods, 2011, 17, 927-937.	2.1	39
40	Distribution of Basement Membrane Molecules, Laminin and Collagen Type IV, in Normal and Degenerated Cartilage Tissues. Cartilage, 2014, 5, 123-132.	2.7	38
41	Modulation of Dental Pulp Stem Cell Odontogenesis in a Tunable PEG-Fibrinogen Hydrogel System. Stem Cells International, 2015, 2015, 1-9.	2.5	38
42	Stem Cells for Temporomandibular Joint Repair and Regeneration. Stem Cell Reviews and Reports, 2015, 11, 728-742.	5.6	34
43	The role of laminins in cartilaginous tissues: from development to regeneration. , 2017, 34, 40-54.		33
44	In Vitro Biocompatibility of Contemporary Bulk-fill Composites. Operative Dentistry, 2015, 40, 644-652.	1.2	32
45	Human fibroblast matrices bio-assembled under macromolecular crowding support stable propagation of human embryonic stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, e74-e86.	2.7	31
46	Distribution of pericellular matrix molecules in the temporomandibular joint and their chondroprotective effects against inflammation. International Journal of Oral Science, 2017, 9, 43-52.	8.6	30
47	Intra-articular Injections of Mesenchymal Stem Cells Without Adjuvant Therapies for Knee Osteoarthritis: A Systematic Review and Meta-analysis. American Journal of Sports Medicine, 2021, 49, 3113-3124.	4.2	29
48	A subpopulation of mesenchymal stromal cells with high osteogenic potential. Journal of Cellular and Molecular Medicine, 2009, 13, 2436-2447.	3.6	28
49	Substrate stiffness modulates the multipotency of human neural crest derived ectomesenchymal stem cells via CD44 mediated PDGFR signaling. Biomaterials, 2018, 167, 153-167.	11.4	28
50	Autologous Feeder Cells from Embryoid Body Outgrowth Support the Long-Term Growth of Human Embryonic Stem Cells More Effectively than Those from Direct Differentiation. Tissue Engineering - Part C: Methods, 2010, 16, 719-733.	2.1	27
51	Basement membrane molecule expression attendant to chondrogenesis by nucleus pulposus cells and mesenchymal stem cells. Journal of Orthopaedic Research, 2013, 31, 1136-1143.	2.3	27
52	Culture media conditioned by heat-shocked osteoblasts enhances the osteogenesis of bone marrow-derived mesenchymal stromal cells. Cell Biochemistry and Function, 2007, 25, 267-276.	2.9	25
53	In Vitro Derivation of Chondrogenic Cells from Human Embryonic Stem Cells. Methods in Molecular Biology, 2009, 584, 317-331.	0.9	25
54	An autologous cell lysate extract from human embryonic stem cell (hESC) derived osteoblasts can enhance osteogenesis of hESC. Tissue and Cell, 2008, 40, 219-228.	2.2	24

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55	Mesenchymal Stem Cell Exosomes Promote Functional Osteochondral Repair in a Clinically Relevant Porcine Model. American Journal of Sports Medicine, 2022, 50, 788-800.	4.2	24
56	Collagen Type IV and Laminin Expressions during Cartilage Repair and in Late Clinically Failed Repair Tissues from Human Subjects. Cartilage, 2016, 7, 52-61.	2.7	19
57	Kinetics of cell death of frozen-thawed human embryonic stem cell colonies is reversibly slowed down by exposure to low temperature. Zygote, 2006, 14, 341-348.	1.1	17
58	Differential Effects of the Extracellular Microenvironment on Human Embryonic Stem Cell Differentiation into Keratinocytes and Their Subsequent Replicative Life Span. Tissue Engineering - Part A, 2015, 21, 1432-1443.	3.1	16
59	Differentiation of Human Embryonic Stem Cells Toward the Chondrogenic Lineage. Methods in Molecular Biology, 2007, 407, 333-349.	0.9	16
60	Potential applications of keratinocytes derived from human embryonic stem cells. Biotechnology Journal, 2016, 11, 58-70.	3.5	14
61	Comparison of cytotoxicity test models for evaluating resin-based composites. Human and Experimental Toxicology, 2017, 36, 339-348.	2.2	14
62	Exploiting Stem Cell-Extracellular Matrix Interactions for Cartilage Regeneration: A Focus on Basement Membrane Molecules. Current Stem Cell Research and Therapy, 2016, 11, 618-625.	1.3	13
63	Inducing pluripotency for disease modeling, drug development and craniofacial applications. Expert Opinion on Biological Therapy, 2014, 14, 1233-1240.	3.1	12
64	Derivation of Chondrogenic Cells from Human Embryonic Stem Cells for Cartilage Tissue Engineering. Methods in Molecular Biology, 2014, , 263-279.	0.9	11
65	Investigation of Human Embryonic Stem Cell-Derived Keratinocytes as an In Vitro Research Model for Mechanical Stress Dynamic Response. Stem Cell Reviews and Reports, 2015, 11, 460-473.	5.6	11
66	Macrophage Polarization as a Facile Strategy to Enhance Efficacy of Macrophage Membraneâ€Coated Nanoparticles in Osteoarthritis. Small Science, 2022, 2, .	9.9	11
67	Practical considerations in transforming MSC therapy for neurological diseases from cell to EV. Experimental Neurology, 2022, 349, 113953.	4.1	9
68	Mesenchymal stromal cell-derived small extracellular vesicles modulate macrophage polarization and enhance angio-osteogenesis to promote bone healing. Genes and Diseases, 2022, 9, 841-844.	3.4	9
69	Hydrogels for Stem Cell Fate Control and Delivery in Regenerative Medicine. Series in Bioengineering, 2015, , 187-214.	0.6	6
70	Mesenchymal Stem Cell Extracellular Vesicles as Adjuvant to Bone Marrow Stimulation in Chondral Defect Repair in a Minipig Model. Cartilage, 2021, 13, 254S-266S.	2.7	5
71	Mesenchymal Stem Cell Exosomes Promote Growth Plate Repair and Reduce Limb-Length Discrepancy in Young Rats. Journal of Bone and Joint Surgery - Series A, 2022, 104, 1098-1106.	3.0	4
72	New Perspectives in Chondrogenic Differentiation of Stem Cells for Cartilage Repair. Scientific World Journal, The, 2006, 6, 361-364.	2.1	3

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73	Stem Cells: Microenvironment, Micro/Nanotechnology, and Application. Stem Cells International, 2015, 2015, 1-2.	2.5	3
74	Injectable Hydrogels for Cartilage Regeneration. Gels Horizons: From Science To Smart Materials, 2018, , 315-337.	0.3	3
75	Recent Progress in Stem Cell Chondrogenesis. Progress in Stem Cell, 2014, 1, 7.	0.4	3
76	Enhanced skin penetration of berberine from proniosome gel attenuates pain and inflammation in a mouse model of osteoarthritis. Biomaterials Science, 2022, 10, 1752-1764.	5.4	3
77	Repair and Regeneration of Temporomandibular Joint: The Future of Stem Cell-Based Therapies. Stem Cells in Clinical Applications, 2016, , 47-75.	0.4	2
78	Recent Progress in Stem Cell Chondrogenesis. Progress in Stem Cell, 2014, 1, .	0.4	1
79	Pluripotent Stem Cells: Differentiation Potential and Therapeutic Efficacy for Cartilage Repair. , 2016, , .		1
80	Stem Cells for Articular Cartilage Repair and Regeneration. Stem Cells in Clinical Applications, 2016, , 119-147.	0.4	0
81	Editorial: Extracellular Vesicle Treatment, Epigenetic Modification and Cell Reprogramming to Promote Bone and Cartilage Regeneration. Frontiers in Bioengineering and Biotechnology, 2021, 9, 678014.	4.1	0
82	Optimising administration of MSC exosomes for cartilage repair in the clinic. Cytotherapy, 2020, 22, S55.	0.7	0