Jianwu Dai

List of Publications by Year
in descending order

109 papers	5,407 citations	50276 46 h-index	95266 68 g-index
110 all docs	110 docs citations	110 times ranked	4890 citing authors

#	Article	IF	Citations
1	The enhancement of cancer stem cell properties of MCF-7 cells in 3D collagen scaffolds for modeling of cancer and anti-cancer drugs. Biomaterials, 2012, 33, 1437-1444.	11.4	241
2	Homogeneous osteogenesis and bone regeneration by demineralized bone matrix loading with collagen-targeting bone morphogenetic protein-2. Biomaterials, 2007, 28, 1027-1035.	11.4	163
3	Regeneration of uterine horns in rats by collagen scaffolds loaded with collagen-binding human basic fibroblast growth factor. Biomaterials, 2011, 32, 8172-8181.	11.4	131
4	Myocardialâ€Infarctionâ€Responsive Smart Hydrogels Targeting Matrix Metalloproteinase for Onâ€Demand Growth Factor Delivery. Advanced Materials, 2019, 31, e1902900.	21.0	128
5	Clinical Study of NeuroRegen Scaffold Combined with Human Mesenchymal Stem Cells for the Repair of Chronic Complete Spinal Cord Injury. Cell Transplantation, 2017, 26, 891-900.	2.5	127
6	Linear Ordered Collagen Scaffolds Loaded with Collagen-Binding Brain-Derived Neurotrophic Factor Improve the Recovery of Spinal Cord Injury in Rats. Tissue Engineering - Part A, 2009, 15, 2927-2935.	3.1	126
7	The promotion of neural regeneration in an extreme rat spinal cord injury model using a collagen scaffold containing a collagen binding neuroprotective protein and an EGFR neutralizing antibody. Biomaterials, 2010, 31, 9212-9220.	11.4	123
8	The use of laminin modified linear ordered collagen scaffolds loaded with laminin-binding ciliary neurotrophic factor for sciatic nerve regeneration in rats. Biomaterials, 2011, 32, 3939-3948.	11.4	123
9	The linear-ordered collagen scaffold-BDNF complex significantly promotes functional recovery after completely transected spinal cord injury in canine. Biomaterials, 2015, 41, 89-96.	11.4	123
10	A collagen microchannel scaffold carrying paclitaxel-liposomes induces neuronal differentiation of neural stem cells through Wnt/Î²-catenin signaling for spinal cord injury repair. Biomaterials, 2018, 183, 114-127.	11.4	118
11	Significant Improvement of Acute Complete Spinal Cord Injury Patients Diagnosed by a Combined Criteria Implanted with NeuroRegen Scaffolds and Mesenchymal Stem Cells. Cell Transplantation, 2018, 27, 907-915.	2.5	118
12	A modified collagen scaffold facilitates endogenous neurogenesis for acute spinal cord injury repair. Acta Biomaterialia, 2017, 51, 304-316.	8.3	117
13	Collagen-Targeting Vascular Endothelial Growth Factor Improves Cardiac Performance After Myocardial Infarction. Circulation, 2009, 119, 1776-1784.	1.6	115
14	Cetuximab modified collagen scaffold directs neurogenesis of injury-activated endogenous neural stem cells for acute spinal cord injury repair. Biomaterials, 2017, 137, 73-86.	11.4	106
15	Promotion of neuronal differentiation of neural progenitor cells by using EGFR antibody functionalized collagen scaffolds for spinal cord injury repair. Biomaterials, 2013, 34, 5107-5116.	11.4	104
16	The effect of collagen-targeting platelet-derived growth factor on cellularization and vascularization of collagen scaffolds. Biomaterials, 2006, 27, 5708-5714.	11.4	101
17	One-year clinical study of NeuroRegen scaffold implantation following scar resection in complete chronic spinal cord injury patients. Science China Life Sciences, 2016, 59, 647-655.	4.9	90
18	Nogo-66 Promotes the Differentiation of Neural Progenitors into Astroglial Lineage Cells through mTOR-STAT3 Pathway. PLoS ONE, 2008, 3, e1856.	2.5	89

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19	The effect of collagen-binding vascular endothelial growth factor on the remodeling of scarred rat uterus following full-thickness injury. Biomaterials, 2012, 33, 1801-1807.	11.4	89
20	Scaffold-facilitated locomotor improvement post complete spinal cord injury: Motor axon regeneration versus endogenous neuronal relay formation. Biomaterials, 2019, 197, 20-31.	11.4	82
21	Small molecules combined with collagen hydrogel direct neurogenesis and migration of neural stem cells after spinal cord injury. Biomaterials, 2021, 269, 120479.	11.4	82
22	Radially Aligned Electrospun Fibers with Continuous Gradient of SDF1Î± for the Guidance of Neural Stem Cells. Small, 2016, 12, 5009-5018.	10.0	81
23	A novel hydrogel-based treatment for complete transection spinal cord injury repair is driven by microglia/macrophages repopulation. Biomaterials, 2020, 237, 119830.	11.4	77
24	Functionalized Collagen Scaffold Neutralizing the Myelin-Inhibitory Molecules Promoted Neurites Outgrowth in Vitro and Facilitated Spinal Cord Regeneration in Vivo. ACS Applied Materials & Interfaces, 2015, 7, 13960-13971.	8.0	76
25	Collagen scaffolds modified with CNTF and bFGF promote facial nerve regeneration in minipigs. Biomaterials, 2014, 35, 7819-7827.	11.4	74
26	Novel nerve guidance material prepared from bovine aponeurosis. Journal of Biomedical Materials Research - Part A, 2006, 79A, 591-598.	4.0	73
27	Linear Ordered Collagen Scaffolds Loaded with Collagen-Binding Neurotrophin-3 Promote Axonal Regeneration and Partial Functional Recovery after Complete Spinal Cord Transection. Journal of Neurotrauma, 2010, 27, 1671-1683.	3.4	73
28	A DAMP-scavenging, IL-10-releasing hydrogel promotes neural regeneration and motor function recovery after spinal cord injury. Biomaterials, 2022, 280, 121279.	11.4	73
29	Functional Multichannel Poly(Propylene Fumarate)â€Collagen Scaffold with Collagenâ€Binding Neurotrophic Factor 3 Promotes Neural Regeneration After Transected Spinal Cord Injury. Advanced Healthcare Materials, 2018, 7, e1800315.	7.6	71
30	Vascularization and cellularization of collagen scaffolds incorporated with two different collagen-targeting human basic fibroblast growth factors. Journal of Biomedical Materials Research - Part A, 2007, 82A, 630-636.	4.0	69
31	Regeneration of full-thickness abdominal wall defects in rats using collagen scaffolds loaded with collagen-binding basic fibroblast growth factor. Biomaterials, 2011, 32, 753-759.	11.4	64
32	Human placenta-derived mesenchymal stem cells loaded on linear ordered collagen scaffold improves functional recovery after completely transected spinal cord injury in canine. Science China Life Sciences, 2018, 61, 2-13.	4.9	64
33	Acceleration of diabetic wound healing by collagen-binding vascular endothelial growth factor in diabetic rat model. Diabetes Research and Clinical Practice, 2010, 90, 66-72.	2.8	62
34	Functionalized collagen scaffold implantation and cAMP administration collectively facilitate spinal cord regeneration. Acta Biomaterialia, 2016, 30, 233-245.	8.3	61
35	Transplantation of hUC-MSCs seeded collagen scaffolds reduces scar formation and promotes functional recovery in canines with chronic spinal cord injury. Scientific Reports, 2017, 7, 43559.	3.3	61
36	The promotion of neurological recovery in the rat spinal cord crushed injury model by collagen-binding BDNF. Biomaterials, 2010, 31, 8634-8641.	11.4	60

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37	LncRNA Neat1 mediates miR-124-induced activation of Wnt/β-catenin signaling in spinal cord neural progenitor cells. Stem Cell Research and Therapy, 2019, 10, 400.	5.5	60
38	Controlled release of collagen-binding SDF-1α from the collagen scaffold promoted tendon regeneration in a rat Achilles tendon defect model. Biomaterials, 2018, 162, 22-33.	11.4	59
39	Bladder Regeneration by Collagen Scaffolds With Collagen Binding Human Basic Fibroblast Growth Factor. Journal of Urology, 2010, 183, 2432-2439.	0.4	58
40	Training Neural Stem Cells on Functional Collagen Scaffolds for Severe Spinal Cord Injury Repair. Advanced Functional Materials, 2016, 26, 5835-5847.	14.9	58
41	A Dual Functional Scaffold Tethered with EGFR Antibody Promotes Neural Stem Cell Retention and Neuronal Differentiation for Spinal Cord Injury Repair. Advanced Healthcare Materials, 2017, 6, 1601279.	7.6	56
42	Bridging the gap with functional collagen scaffolds: tuning endogenous neural stem cells for severe spinal cord injury repair. Biomaterials Science, 2018, 6, 265-271.	5.4	56
43	Cetuximab and Taxol co-modified collagen scaffolds show combination effects for the repair of acute spinal cord injury. Biomaterials Science, 2018, 6, 1723-1734.	5.4	55
44	Promotion of diabetic wound healing by collagen scaffold with collagen-binding vascular endothelial growth factor in a diabetic rat model. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 195-201.	2.7	54
45	Aligned collagen scaffold combination with human spinal cord-derived neural stem cells to improve spinal cord injury repair. Biomaterials Science, 2020, 8, 5145-5156.	5.4	51
46	Taxol-modified collagen scaffold implantation promotes functional recovery after long-distance spinal cord complete transection in canines. Biomaterials Science, 2018, 6, 1099-1108.	5.4	50
47	Collagen scaffold combined with human umbilical cord-derived mesenchymal stem cells promote functional recovery after scar resection in rats with chronic spinal cord injury. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e1154-e1163.	2.7	50
48	Collagen scaffolds modified with collagen-binding bFGF promotes the neural regeneration in a rat hemisected spinal cord injury model. Science China Life Sciences, 2014, 57, 232-240.	4.9	49
49	Linear Ordered Collagen Scaffolds Loaded with Collagen-Binding Basic Fibroblast Growth Factor Facilitate Recovery of Sciatic Nerve Injury in Rats. Tissue Engineering - Part A, 2014, 20, 1253-1262.	3.1	47
50	A dual functional collagen scaffold coordinates angiogenesis and inflammation for diabetic wound healing. Biomaterials Science, 2020, 8, 6337-6349.	5.4	45
51	NSCs Migration Promoted and Drug Delivered Exosomes-Collagen Scaffold via a Bio-Specific Peptide for One-Step Spinal Cord Injury Repair. Advanced Healthcare Materials, 2021, 10, e2001896.	7.6	45
52	Modified VEGF targets the ischemic myocardium and promotes functional recovery after myocardial infarction. Journal of Controlled Release, 2015, 213, 27-35.	9.9	44
53	Improved neovascularization and wound repair by targeting human basic fibroblast growth factor (bFGF) to fibrin. Journal of Molecular Medicine, 2008, 86, 1127-1138.	3.9	42
54	Extrahepatic bile duct regeneration in pigs using collagen scaffolds loaded with human collagen-binding bFGF. Biomaterials, 2012, 33, 4298-4308.	11.4	42

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55	Adhesive, Stretchable, and Spatiotemporal Delivery Fibrous Hydrogels Harness Endogenous Neural Stem/Progenitor Cells for Spinal Cord Injury Repair. ACS Nano, 2022, 16, 1986-1998.	14.6	40
56	Collagen-binding basic fibroblast growth factor improves functional remodeling of scarred endometrium in uterine infertile women: a pilot study. Science China Life Sciences, 2019, 62, 1617-1629.	4.9	38
57	Controlled Release of Collagen-Binding SDF-1α Improves Cardiac Function after Myocardial Infarction by Recruiting Endogenous Stem Cells. Scientific Reports, 2016, 6, 26683.	3.3	37
58	Advances in Biomaterial-Based Spinal Cord Injury Repair. Advanced Functional Materials, 2022, 32, 2110628.	14.9	37
59	The neuronal differentiation microenvironment is essential for spinal cord injury repair. Organogenesis, 2017, 13, 63-70.	1.2	35
60	Different functional bio-scaffolds share similar neurological mechanism to promote locomotor recovery of canines with complete spinal cord injury. Biomaterials, 2019, 214, 119230.	11.4	32
61	Neural regrowth induced by PLGA nerve conduits and neurotrophin-3 in rats with complete spinal cord transection. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 97B, 271-277.	3.4	31
62	Long-term clinical observation of patients with acute and chronic complete spinal cord injury after transplantation of NeuroRegen scaffold. Science China Life Sciences, 2022, 65, 909-926.	4.9	31
63	Single-molecule level binding force between collagen and collagen binding domain-growth factor conjugates. Biomaterials, 2013, 34, 6139-6146.	11.4	28
64	Comparison of subacute and chronic scar tissues after complete spinal cord transection. Experimental Neurology, 2018, 306, 132-137.	4.1	26
65	Bladder regeneration in a canine model using a bladder acellular matrix loaded with a collagen-binding bFGF. Biomaterials Science, 2017, 5, 2427-2436.	5.4	26
66	Collagen/Heparin Bi-Affinity Multilayer Modified Collagen Scaffolds for Controlled bFGF Release to Improve Angiogenesis In Vivo. Macromolecular Bioscience, 2018, 18, e1800086.	4.1	25
67	Comparison of Regenerative Effects of Transplanting Three-Dimensional Longitudinal Scaffold Loaded-Human Mesenchymal Stem Cells and Human Neural Stem Cells on Spinal Cord Completely Transected Rats. ACS Biomaterials Science and Engineering, 2020, 6, 1671-1680.	5.2	25
68	Use of Natural Neural Scaffolds Consisting of Engineered Vascular Endothelial Growth Factor Immobilized on Ordered Collagen Fibers Filled in a Collagen Tube for Peripheral Nerve Regeneration in Rats. International Journal of Molecular Sciences, 2014, 15, 18593-18609.	4.1	24
69	Bladder Acellular Matrix Conjugated with Basic Fibroblast Growth Factor for Bladder Regeneration. Tissue Engineering - Part A, 2014, 20, 2234-2242.	3.1	24
70	Long-term stability, high strength, and 3D printable alginate hydrogel for cartilage tissue engineering application. Biomedical Materials (Bristol), 2021, 16, 064102.	3.3	24
71	Aligned Scaffolds with Biomolecular Gradients for Regenerative Medicine. Polymers, 2019, 11, 341.	4.5	23
72	Direct Neuronal Differentiation of Neural Stem Cells for Spinal Cord Injury Repair. Stem Cells, 2021, 39, 1025-1032.	3.2	23

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73	Transplantation of human adipose-derived mesenchymal stem cells on a bladder acellular matrix for bladder regeneration in a canine model. Biomedical Materials (Bristol), 2016, 11, 031001.	3.3	22
74	Heparan sulfate proteoglycan promotes fibroblast growth factor-2 function for ischemic heart repair. Biomaterials Science, 2019, 7, 5438-5450.	5.4	21
75	Biomineralization improves the thermostability of *foot-and-mouth disease* virus-like particles and the protective immune response induced. Nanoscale, 2019, 11, 22748-22761.	5.6	21
76	Complete canine spinal cord transection model: a large animal model for the translational research of spinal cord regeneration. Science China Life Sciences, 2018, 61, 115-117.	4.9	20
77	Epidermal growth factor receptor-extracellular-regulated kinase blockade upregulates TRIM32 signaling cascade and promotes neurogenesis after spinal cord injury. Stem Cells, 2020, 38, 118-133.	3.2	19
78	Identification of ZG16B as a prognostic biomarker in breast cancer. Open Medicine (Poland), 2020, 16, 1-13.	1.3	19
79	Acceleration of Healing of Traumatic Tympanic Membrane Perforation in Rats by Implanted Collagen Membrane Integrated with Collagen-Binding Basic Fibroblast Growth Factor. Tissue Engineering - Part A, 2017, 23, 20-29.	3.1	17
80	Collagen-binding VEGF targeting the cardiac extracellular matrix promotes recovery in porcine chronic myocardial infarction. Biomaterials Science, 2018, 6, 356-363.	5.4	17
81	Pre-Clinical Evaluation of CBD-NT3 Modified Collagen Scaffolds in Completely Spinal Cord Transected Non-Human Primates. Journal of Neurotrauma, 2019, 36, 2316-2324.	3.4	17
82	Identification of NCAPH as a biomarker for prognosis of breast cancer. Molecular Biology Reports, 2020, 47, 7831-7842.	2.3	17
83	Dualâ€Cues Laden Scaffold Facilitates Neurovascular Regeneration and Motor Functional Recovery After Complete Spinal Cord Injury. Advanced Healthcare Materials, 2021, 10, e2100089.	7.6	17
84	Transplantation of adult spinal cord grafts into spinal cord transected rats improves their locomotor function. Science China Life Sciences, 2019, 62, 725-733.	4.9	16
85	Optimized, visible light-induced crosslinkable hybrid gelatin/hyaluronic acid scaffold promotes complete spinal cord injury repair. Biomedical Materials (Bristol), 2022, 17, 024104.	3.3	14
86	Lower fluidity of supported lipid bilayers promotes neuronal differentiation of neural stem cells by enhancing focal adhesion formation. Biomaterials, 2018, 161, 106-116.	11.4	13
87	Transplantation of collagen sponge-based three-dimensional neural stem cells cultured in a RCCS facilitates locomotor functional recovery in spinal cord injury animals. Biomaterials Science, 2022, 10, 915-924.	5.4	13
88	Binary scaffold facilitates *in situ* regeneration of axons and neurons for complete spinal cord injury repair. Biomaterials Science, 2021, 9, 2955-2971.	5.4	12
89	Scar tissue removal-activated endogenous neural stem cells aid Taxol-modified collagen scaffolds in repairing chronic long-distance transected spinal cord injury. Biomaterials Science, 2021, 9, 4778-4792.	5.4	12
90	Upregulation of Apol8 by Epothilone D facilitates the neuronal relay of transplanted NSCs in spinal cord injury. Stem Cell Research and Therapy, 2021, 12, 300.	5.5	12

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91	The Rotary Cell Culture System increases NTRK3 expression and promotes neuronal differentiation and migratory ability of neural stem cells cultured on collagen sponge. Stem Cell Research and Therapy, 2021, 12, 298.	5.5	12
92	The Alterations and Potential Roles of MCMs in Breast Cancer. Journal of Oncology, 2021, 2021, 1-17.	1.3	11
93	Systematic Analysis of mRNA and miRNA Expression of 3D-Cultured Neural Stem Cells (NSCs) in Spaceflight. Frontiers in Cellular Neuroscience, 2017, 11, 434.	3.7	10
94	Epithelial Splicing Regulatory Protein 1 Is Overexpressed in Breast Cancer and Predicts Poor Prognosis for Breast Cancer Patients. Medical Science Monitor, 2021, 27, e931102.	1.1	10
95	Urethral Tissue Reconstruction Using the Acellular Dermal Matrix Patch Modified with Collagen-Binding VEGF in Beagle Urethral Injury Models. BioMed Research International, 2021, 2021, 1-10.	1.9	10
96	The role of mechanosensitive Piezo1 channel in diseases. Progress in Biophysics and Molecular Biology, 2022, 172, 39-49.	2.9	10
97	Allotransplantation of adult spinal cord tissues after complete transected spinal cord injury: Long-term survival and functional recovery in canines. Science China Life Sciences, 2020, 63, 1879-1886.	4.9	9
98	Specific angiogenic peptide binding with injectable cardiac <scp>ECM</scp> collagen gel promotes the recovery of myocardial infarction in rat. Journal of Biomedical Materials Research - Part A, 2020, 108, 1881-1889.	4.0	8
99	Specific bio–functional <scp>CBD–PR1P</scp> peptide binding <scp>VEGF</scp> to collagen hydrogels promotes the recovery of cerebral ischemia in rats. Journal of Biomedical Materials Research - Part A, 0, , .	4.0	6
100	Bioinspired bimodal micro-nanofibrous scaffolds promote the tenogenic differentiation of tendon stem/progenitor cells for achilles tendon regeneration. Biomaterials Science, 2022, 10, 753-769.	5.4	5
101	Scaffolds for spinal cord injury repair: from proof of concept to first in-human studies and clinical trials. , 2020, , 603-619.		4
102	Spatiotemporal dynamic changes, proliferation, and differentiation characteristics of Sox9-positive cells after severe complete transection spinal cord injury. Experimental Neurology, 2021, 337, 113556.	4.1	4
103	High strength pure chitosan hydrogels via double crosslinking strategy. Biomedical Materials (Bristol), 2021, 16, 045048.	3.3	4
104	Application of biomaterials and tissue engineering in bladder regeneration. Journal of Biomaterials Applications, 2022, 36, 1484-1502.	2.4	4
105	Specific bFGF targeting of KIM-1 in ischemic kidneys protects against renal ischemia-reperfusion injury in rats. International Journal of Energy Production and Management, 2022, 9, .	3.7	4
106	Spinal cord decellularized matrix scaffold loaded with engineered basic fibroblast growth factor–overexpressed human umbilical cord mesenchymal stromal cells promoted the recovery of spinal cord injury. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2023, 111, 51-61.	3.4	4
107	Transmembrane protein 16A/anoctamin 1 inhibitor T16A_{inh}–A01 reversed monocrotaline–induced rat pulmonary arterial hypertension. Pulmonary Circulation, 2020, 10, 1-11.	1.7	3
108	Contralateral Axon Sprouting but Not Ipsilateral Regeneration Is Responsible for Spontaneous Locomotor Recovery Post Spinal Cord Hemisection. Frontiers in Cellular Neuroscience, 2021, 15, 730348.	3.7	3

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109	Identification of LIG1 and LIG3 as prognostic biomarkers in breast cancer. Open Medicine (Poland), 2021, 16, 1705-1717.	1.3	2