

Liang Gao

List of Publications by Year in descending order

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Version: 2024-02-01

116
papers

4,671
citations

117571

34
h-index

110317

64
g-index

132
all docs

132
docs citations

132
times ranked

4954
citing authors

#	ARTICLE	IF	CITATIONS
1	The basic science of the subchondral bone. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2010, 18, 419-433.	2.3	478
2	Efficacy of face mask in preventing respiratory virus transmission: A systematic review and meta-analysis. <i>Travel Medicine and Infectious Disease</i> , 2020, 36, 101751.	1.5	325
3	The subchondral bone in articular cartilage repair: current problems in the surgical management. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2010, 18, 434-447.	2.3	320
4	Biological aspects of early osteoarthritis. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2012, 20, 407-422.	2.3	184
5	Early osteoarthritis of the knee. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2016, 24, 1753-1762.	2.3	180
6	Face masks to prevent transmission of COVID-19: A systematic review and meta-analysis. <i>American Journal of Infection Control</i> , 2021, 49, 900-906.	1.1	163
7	Restoration of the extracellular matrix in human osteoarthritic articular cartilage by overexpression of the transcription factor SOX9. <i>Arthritis and Rheumatism</i> , 2007, 56, 158-167.	6.7	143
8	Small Subchondral Drill Holes Improve Marrow Stimulation of Articular Cartilage Defects. <i>American Journal of Sports Medicine</i> , 2014, 42, 2741-2750.	1.9	119
9	Transforming Growth Factor Beta-Releasing Scaffolds for Cartilage Tissue Engineering. <i>Tissue Engineering - Part B: Reviews</i> , 2014, 20, 106-125.	2.5	114
10	Effect of Subchondral Drilling on the Microarchitecture of Subchondral Bone. <i>American Journal of Sports Medicine</i> , 2012, 40, 828-836.	1.9	109
11	Thermosensitive Hydrogel Based on PEO-PPO-PEO Poloxamers for a Controlled In Situ Release of Recombinant Adeno-Associated Viral Vectors for Effective Gene Therapy of Cartilage Defects. <i>Advanced Materials</i> , 2020, 32, e1906508.	11.1	108
12	CircRNA_100367 regulated the radiation sensitivity of esophageal squamous cell carcinomas through miR-217/Wnt3 pathway. <i>Aging</i> , 2019, 11, 12412-12427.	1.4	105
13	Biomaterial-guided delivery of gene vectors for targeted articular cartilage repair. <i>Nature Reviews Rheumatology</i> , 2019, 15, 18-29.	3.5	92
14	Gene Transfer of a Human Insulin-Like Growth Factor I cDNA Enhances Tissue Engineering of Cartilage. <i>Human Gene Therapy</i> , 2002, 13, 1621-1630.	1.4	86
15	Cartilage Repair and Joint Preservation. <i>Deutsches Arzteblatt International</i> , 2011, 108, 669-77.	0.6	83
16	Failed cartilage repair for early osteoarthritis defects: a biochemical, histological and immunohistochemical analysis of the repair tissue after treatment with marrow-stimulation techniques. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2012, 20, 2315-2324.	2.3	82
17	Direct rAAV SOX9 administration for durable articular cartilage repair with delayed terminal differentiation and hypertrophy in vivo. <i>Journal of Molecular Medicine</i> , 2013, 91, 625-636.	1.7	80
18	Autologous Matrix-Induced Chondrogenesis: A Systematic Review of the Clinical Evidence. <i>American Journal of Sports Medicine</i> , 2019, 47, 222-231.	1.9	77

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19	Microfracture for cartilage repair in the knee: a systematic review of the contemporary literature. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2020, 28, 670-706.	2.3	73
20	Small-Diameter Awls Improve Articular Cartilage Repair After Microfracture Treatment in a Translational Animal Model. <i>American Journal of Sports Medicine</i> , 2016, 44, 209-219.	1.9	67
21	Bone Marrow Aspirate Concentrate-Enhanced Marrow Stimulation of Chondral Defects. <i>Stem Cells International</i> , 2017, 2017, 1-13.	1.2	56
22	Reliability, Reproducibility, and Validation of Five Major Histological Scoring Systems for Experimental Articular Cartilage Repair in the Rabbit Model. <i>Tissue Engineering - Part C: Methods</i> , 2012, 18, 329-339.	1.1	55
23	PEO-PPO-PEO micelles as effective rAAV-mediated gene delivery systems to target human mesenchymal stem cells without altering their differentiation potency. <i>Acta Biomaterialia</i> , 2015, 27, 42-52.	4.1	50
24	Improved repair of chondral and osteochondral defects in the ovine trochlea compared with the medial condyle. <i>Journal of Orthopaedic Research</i> , 2013, 31, 1772-1779.	1.2	49
25	The subchondral bone: a new frontier in articular cartilage repair. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2010, 18, 417-418.	2.3	48
26	Hydrogel-Guided, rAAV-Mediated IGF-1 Overexpression Enables Long-Term Cartilage Repair and Protection against Perifocal Osteoarthritis in a Large-Animal Full-Thickness Chondral Defect Model at One Year In Vivo. <i>Advanced Materials</i> , 2021, 33, e2008451.	11.1	47
27	Chondral and osteochondral operative treatment in early osteoarthritis. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2016, 24, 1743-1752.	2.3	46
28	Osteoarthritis: Novel Molecular Mechanisms Increase Our Understanding of the Disease Pathology. <i>Journal of Clinical Medicine</i> , 2021, 10, 1938.	1.0	44
29	lncRNA KLF3-AS1 Suppresses Cell Migration and Invasion in ESCC by Impairing miR-185-5p-Targeted KLF3 Inhibition. <i>Molecular Therapy - Nucleic Acids</i> , 2020, 20, 231-241.	2.3	43
30	Wedge volume and osteotomy surface depend on surgical technique for high tibial osteotomy. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2013, 21, 127-133.	2.3	41
31	Advances in modern osteotomies around the knee. <i>Journal of Experimental Orthopaedics</i> , 2019, 6, 9.	0.8	41
32	An overview of thermal necrosis: present and future. <i>Current Medical Research and Opinion</i> , 2019, 35, 1555-1562.	0.9	41
33	Epidemiology and imaging of the subchondral bone in articular cartilage repair. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2010, 18, 463-471.	2.3	38
34	PEO-PPO-PEO Carriers for rAAV-Mediated Transduction of Human Articular Chondrocytes in Vitro and in a Human Osteochondral Defect Model. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 20600-20613.	4.0	38
35	Subchondral drilling for articular cartilage repair: a systematic review of translational research. <i>DMM Disease Models and Mechanisms</i> , 2018, 11, .	1.2	37
36	Effect of open wedge high tibial osteotomy on the lateral tibiofemoral compartment in sheep. Part III: analysis of the microstructure of the subchondral bone and correlations with the articular cartilage and meniscus. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2015, 23, 2704-2714.	2.3	35

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37	Effect of open wedge high tibial osteotomy on the lateral tibiofemoral compartment in sheep. Part II: standard and overcorrection do not cause articular cartilage degeneration. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2014, 22, 1666-1677.	2.3	33
38	rAAV-mediated overexpression of TGF- β via vector delivery in polymeric micelles stimulates the biological and reparative activities of human articular chondrocytes in vitro and in a human osteochondral defect model. <i>International Journal of Nanomedicine</i> , 2017, Volume 12, 6985-6996.	3.3	33
39	Effect of open wedge high tibial osteotomy on the lateral compartment in sheep. Part I: analysis of the lateral meniscus. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2013, 21, 39-48.	2.3	32
40	Reduction of Sample Size Requirements by Bilateral Versus Unilateral Research Designs in Animal Models for Cartilage Tissue Engineering. <i>Tissue Engineering - Part C: Methods</i> , 2013, 19, 885-891.	1.1	31
41	Large animal models in experimental knee sports surgery: focus on clinical translation. <i>Journal of Experimental Orthopaedics</i> , 2015, 2, 9.	0.8	31
42	Topographic modeling of early human osteoarthritis in sheep. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	31
43	Effective Remodelling of Human Osteoarthritic Cartilage by <i>sox9</i> Gene Transfer and Overexpression upon Delivery of rAAV Vectors in Polymeric Micelles. <i>Molecular Pharmaceutics</i> , 2018, 15, 2816-2826.	2.3	29
44	The preclinical sheep model of high tibial osteotomy relating basic science to the clinics: standards, techniques and pitfalls. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2013, 21, 228-236.	2.3	27
45	A low morbidity surgical approach to the sheep femoral trochlea. <i>BMC Musculoskeletal Disorders</i> , 2013, 14, 5.	0.8	26
46	Supercapsular percutaneously-assisted total hip (SuperPath) versus posterolateral total hip arthroplasty in bilateral osteonecrosis of the femoral head: a pilot clinical trial. <i>BMC Musculoskeletal Disorders</i> , 2020, 21, 2.	0.8	25
47	Translational applications of photopolymerizable hydrogels for cartilage repair. <i>Journal of Experimental Orthopaedics</i> , 2019, 6, 47.	0.8	25
48	Comprehensive analysis of translational osteochondral repair: Focus on the histological assessment. <i>Progress in Histochemistry and Cytochemistry</i> , 2015, 50, 19-36.	5.1	24
49	Role of the Subchondral Bone in Articular Cartilage Degeneration and Repair. <i>Journal of the American Academy of Orthopaedic Surgeons</i> , The, 2016, 24, e45-e46.	1.1	24
50	Co-overexpression of TGF- β 2 and SOX9 via rAAV gene transfer modulates the metabolic and chondrogenic activities of human bone marrow-derived mesenchymal stem cells. <i>Stem Cell Research and Therapy</i> , 2016, 7, 20.	2.4	24
51	Current Evidence of Adult Stem Cells to Enhance Anterior Cruciate Ligament Treatment: A Systematic Review of Animal Trials. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , 2018, 34, 331-340.e2.	1.3	24
52	Nasu-Hakola Disease (PLOSL). <i>Clinical Orthopaedics and Related Research</i> , 2007, 454, 262-269.	0.7	22
53	Advancement of the Subchondral Bone Plate in Translational Models of Osteochondral Repair: Implications for Tissue Engineering Approaches. <i>Tissue Engineering - Part B: Reviews</i> , 2015, 21, 504-520.	2.5	22
54	Three-dimensional-printed upper limb prosthesis for a child with traumatic amputation of right wrist. <i>Medicine (United States)</i> , 2017, 96, e9426.	0.4	22

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55	Analysis of spatial osteochondral heterogeneity in advanced knee osteoarthritis exposes influence of joint alignment. <i>Science Translational Medicine</i> , 2020, 12, .	5.8	21
56	Early loss of subchondral bone following microfracture is counteracted by bone marrow aspirate in a translational model of osteochondral repair. <i>Scientific Reports</i> , 2017, 7, 45189.	1.6	20
57	Human mesenchymal stem cells overexpressing therapeutic genes: From basic science to clinical applications for articular cartilage repair. <i>Bio-Medical Materials and Engineering</i> , 2012, 22, 197-208.	0.4	19
58	Surgical anatomy of medial open-wedge high tibial osteotomy: crucial steps and pitfalls. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2017, 25, 3661-3669.	2.3	19
59	Smurf1-targeting miR-19b-3p-modified BMSCs combined PLLA composite scaffold to enhance osteogenic activity and treat critical-sized bone defects. <i>Biomaterials Science</i> , 2020, 8, 6069-6081.	2.6	19
60	The fabrication of a highly efficient hydrogel based on a functionalized double network loaded with magnesium ion and BMP2 for bone defect synergistic treatment. <i>Materials Science and Engineering C</i> , 2021, 128, 112347.	3.8	17
61	Sustained spatiotemporal release of TGF β 21 confers enhanced very early chondrogenic differentiation during osteochondral repair in specific topographic patterns. <i>FASEB Journal</i> , 2018, 32, 5298-5311.	0.2	16
62	Scaffold-Mediated Gene Delivery for Osteochondral Repair. <i>Pharmaceutics</i> , 2020, 12, 930.	2.0	16
63	Surgical therapy in osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2022, 30, 1019-1034.	0.6	16
64	Effects of solid acellular type-I/III collagen biomaterials on in vitro and in vivo chondrogenesis of mesenchymal stem cells. <i>Expert Review of Medical Devices</i> , 2017, 14, 717-732.	1.4	15
65	Enhanced Chondrogenic Differentiation Activities in Human Bone Marrow Aspirates via sox9 Overexpression Mediated by pNaSS-Grafted PCL Film-Guided rAAV Gene Transfer. <i>Pharmaceutics</i> , 2020, 12, 280.	2.0	15
66	Comparative anatomy and morphology of the knee in translational models for articular cartilage disorders. Part I: Large animals. <i>Annals of Anatomy</i> , 2021, 235, 151680.	1.0	15
67	Aberrantly expressed messenger RNAs and long noncoding RNAs in degenerative nucleus pulposus cells co-cultured with adipose-derived mesenchymal stem cells. <i>Arthritis Research and Therapy</i> , 2018, 20, 182.	1.6	14
68	rAAV-Mediated <i>sox9</i> Overexpression Improves the Repair of Osteochondral Defects in a Clinically Relevant Large Animal Model Over Time In Vivo and Reduces Perifocal Osteoarthritic Changes. <i>American Journal of Sports Medicine</i> , 2021, 49, 3696-3707.	1.9	13
69	New trends in articular cartilage repair. <i>Journal of Experimental Orthopaedics</i> , 2015, 2, 8.	0.8	12
70	Reliable landmarks for precise topographical analyses of pathological structural changes of the ovine tibial plateau in 2-D and 3-D subspaces. <i>Scientific Reports</i> , 2018, 8, 75.	1.6	12
71	Small-Diameter Subchondral Drilling Improves DNA and Proteoglycan Content of the Cartilaginous Repair Tissue in a Large Animal Model of a Full-Thickness Chondral Defect. <i>Journal of Clinical Medicine</i> , 2020, 9, 1903.	1.0	12
72	Supercapsular percutaneously-assisted total hip (SuperPath) versus mini-incision posterolateral total hip arthroplasty for hip osteoarthritis: a prospective randomized controlled trial. <i>Annals of Translational Medicine</i> , 2021, 9, 392-392.	0.7	12

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73	Evaluation and analysis of graft hypertrophy by means of arthroscopy, biochemical MRI and osteochondral biopsies in a patient following autologous chondrocyte implantation for treatment of a full-thickness-cartilage defect of the knee. Archives of Orthopaedic and Trauma Surgery, 2015, 135, 819-830.	1.3	11
74	A novel algorithm for a precise analysis of subchondral bone alterations. Scientific Reports, 2016, 6, 32982.	1.6	11
75	Cyst formation in the subchondral bone following cartilage repair. Clinical and Translational Medicine, 2020, 10, e248.	1.7	11
76	Biological Reconstruction of the Osteochondral Unit After Failed Focal Resurfacing of a Chondral Defect in the Knee. American Journal of Sports Medicine, 2016, 44, 2911-2916.	1.9	10
77	High resolution MRI imaging at 9.4 Tesla of the osteochondral unit in a translational model of articular cartilage repair. BMC Musculoskeletal Disorders, 2015, 16, 91.	0.8	9
78	Early OA: point of no return or a chance for regenerative approaches. Knee Surgery, Sports Traumatology, Arthroscopy, 2016, 24, 1741-1742.	2.3	8
79	Human Wharton's Jelly Cells Activate Degenerative Nucleus Pulposus Cells<i> In Vitro</i>. Tissue Engineering - Part A, 2018, 24, 1035-1043.	1.6	8
80	Total Hip Arthroplasty or Hemiarthroplasty for Hip Fracture. New England Journal of Medicine, 2020, 382, 1072-1074.	13.9	8
81	High serum superoxide dismutase activity improves radiation-related quality of life in patients with esophageal squamous cell carcinoma. Clinics, 2021, 76, e2226.	0.6	8
82	The future of basic science in orthopaedics and traumatology: Cassandra or Prometheus?. European Journal of Medical Research, 2021, 26, 56.	0.9	7
83	Axial alignment is a critical regulator of knee osteoarthritis. Science Translational Medicine, 2022, 14, eabn0179.	5.8	7
84	Enamel matrix derivative inhibits proteoglycan production and articular cartilage repair, delays the restoration of the subchondral bone and induces changes of the synovial membrane in a lapine osteochondral defect modelin vivo. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 41-49.	1.3	6
85	Translating orthopaedic basic science into clinical relevance. Journal of Experimental Orthopaedics, 2014, 1, 5.	0.8	6
86	Clinical trial reporting. Lancet, The, 2020, 396, 1488-1489.	6.3	6
87	Diagnosis and Surgical Treatment of Human Brucellar Spondylodiscitis. Journal of Visualized Experiments, 2021, , .	0.2	6
88	Quantitative magnetic resonance imaging for diagnosis of intervertebral disc degeneration of the cervico-thoracic junction: a pilot study. American Journal of Translational Research (discontinued), 2018, 10, 925-935.	0.0	6
89	Effects of combined rAAV-mediated TGF- β 2 and sox9 gene transfer and overexpression on the metabolic and chondrogenic activities in human bone marrow aspirates. Journal of Experimental Orthopaedics, 2017, 4, 4.	0.8	5
90	The Osteochondral Unit: The Importance of the Underlying Subchondral Bone. , 2018, , 13-22.		5

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91	Association of Nicotine with Osteochondrogenesis and Osteoarthritis Development: The State of the Art of Preclinical Research. <i>Journal of Clinical Medicine</i> , 2019, 8, 1699.	1.0	5
92	Feasibility of T2 Mapping and Magnetic Transfer Ratio for Diagnosis of Intervertebral Disc Degeneration at the Cervicothoracic Junction: A Pilot Study. <i>BioMed Research International</i> , 2019, 2019, 1-9.	0.9	5
93	Investigation of microstructural alterations of the human subchondral bone following microfracture penetration reveals effect of three-dimensional device morphology. <i>Clinical and Translational Medicine</i> , 2020, 10, e230.	1.7	5
94	pNaSS-Grafted PCL Film-Guided rAAV TGF- β 2 Gene Therapy Activates the Chondrogenic Activities in Human Bone Marrow Aspirates. <i>Human Gene Therapy</i> , 2021, 32, 895-906.	1.4	4
95	Comprehensive RNA expression profile of therapeutic adipose-derived mesenchymal stem cells co-cultured with degenerative nucleus pulposus cells. <i>Molecular Medicine Reports</i> , 2021, 23, .	1.1	3
96	Subchondral Drilling Independent of Drill Hole Number Improves Articular Cartilage Repair and Reduces Subchondral Bone Alterations Compared With Debridement in Adult Sheep. <i>American Journal of Sports Medicine</i> , 2022, 50, 2669-2679.	1.9	3
97	Establishment and Initial Testing of a Medium-Sized, Surgically Feasible Animal Model for Brucellar Spondylodiscitis: A Preliminary Study. <i>BioMed Research International</i> , 2019, 2019, 1-8.	0.9	2
98	Future Aspects of Clinical Osteoarthritis Therapies in the Continuum of Translational Research. <i>Zeitschrift Fur Orthopadie Und Unfallchirurgie</i> , 2019, 157, 629-643.	0.4	2
99	Tissue-engineered cartilage products. , 2020, , 1499-1509.		2
100	A Novel Rat Tail Needle Minimally Invasive Puncture Model Using Three-Dimensional Printing for Disk Degeneration and Progressive Osteogenesis Research. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 587399.	1.8	2
101	Pleomorphic rhabdomyosarcoma of the spermatic cord and a secondary hydrocele testis: A case report. <i>World Journal of Clinical Cases</i> , 2020, 8, 2641-2646.	0.3	2
102	A high-resolution cross-species comparative analysis of the subchondral bone provides insight into critical topographical patterns of the osteochondral unit. <i>Clinical and Translational Medicine</i> , 2022, 12, e745.	1.7	2
103	Spinal-pelvic sagittal parameters in patients with gluteal muscle contracture: an imaging study. <i>PeerJ</i> , 2022, 10, e13093.	0.9	2
104	Asymptomatic focal calcium pyrophosphate crystal deposition within partially failed repair tissue after matrix-assisted autologous chondrocyte implantation. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2019, 27, 1939-1942.	2.3	1
105	Definition of Early Osteoarthritis. , 2022, , 3-15.		1
106	Retroperitoneal vs transperitoneal laparoscopic lithotripsy of 20-40 mm renal stones within horseshoe kidneys. <i>World Journal of Clinical Cases</i> , 2020, 8, 4753-4762.	0.3	1
107	Animal Models in Cartilage Repair. , 2017, , 189-206.		0
108	Gene Therapy for Osteoarthritis Treatment and Joint Preservation. <i>International Journal of Recent Surgical and Medical Sciences</i> , 2019, 05, 002-003.	0.1	0

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109	Elbow instead of hand: is it more helpful or harmful?. Journal of Public Health, 2020, , .	1.0	0
110	Letter to the editor regarding "The new AO classification system for intertrochanteric fractures allows better agreement than the original AO classification. An inter- and intra-observer agreement evaluation". Injury, 2020, , .	0.7	0
111	Preclinical Models of Brucellar Spondylodiscitis. , 0, , .		0
112	Potential Gene Therapy Options for Early OA. , 2022, , 321-337.		0
113	Long Non-Coding RNA DIO3OS Binds to microRNA-130b to Restore Radiosensitivity in Esophageal Squamous Cell Carcinoma by Upregulating PAX9. SSRN Electronic Journal, 0, , .	0.4	0
114	COVID-19 pandemic should be an arena of international cooperation for a shared future. AME Medical Journal, 0, 5, 45-45.	0.4	0
115	The Illustrative Anatomy and the Histology of the Degenerative Hyaline Cartilage. , 2021, , 11-19.		0
116	Minimally invasive <i>versus</i> traditional inverted "L" approach for posterior cruciate ligament avulsion fractures: a retrospective study. PeerJ, 0, 10, e13732.	0.9	0