James A Martin

List of Publications by Year in descending order

108 papers	5,837 citations	81743 39 h-index	76769 74 g-index
110 all docs	110 docs citations	110 times ranked	6113 citing authors

#	Article	IF	Citations
1	Postâ€traumatic osteoarthritis: Improved understanding and opportunities for early intervention. Journal of Orthopaedic Research, 2011, 29, 802-809.	1.2	511
2	Aging, articular cartilage chondrocyte senescence and osteoarthritis. Biogerontology, 2002, 3, 257-264.	2.0	297
3	THE ROLE OF CHONDROCYTE SENESCENCE IN THE PATHOGENESIS OF OSTEOARTHRITIS AND IN LIMITING CARTILAGE REPAIR. Journal of Bone and Joint Surgery - Series A, 2003, 85, 106-110.	1.4	253
4	Osteoarthritisâ˜†. Advanced Drug Delivery Reviews, 2006, 58, 150-167.	6.6	252
5	The Potential of Human Allogeneic Juvenile Chondrocytes for Restoration of Articular Cartilage. American Journal of Sports Medicine, 2010, 38, 1324-1333.	1.9	236
6	Evaluation of Cell Viability and Functionality in Vessel-like Bioprintable Cell-Laden Tubular Channels. Journal of Biomechanical Engineering, 2013, 135, 91011.	0.6	218
7	Three-dimensional bioprinting using self-assembling scalable scaffold-free â€œtissue strandsâ€•as a new bioink. Scientific Reports, 2016, 6, 28714.	1.6	204
8	Telomere Erosion and Senescence in Human Articular Cartilage Chondrocytes. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2001, 56, B172-B179.	1.7	190
9	Chondrogenic progenitor cells respond to cartilage injury. Arthritis and Rheumatism, 2012, 64, 3626-3637.	6.7	184
10	The Roles of Mechanical Stresses in the Pathogenesis of Osteoarthritis. Cartilage, 2013, 4, 286-294.	1.4	175
11	Chondrocyte Senescence, Joint Loading and Osteoarthritis. Clinical Orthopaedics and Related Research, 2004, 427, S96-S103.	0.7	172
12	Age-related decline in chondrocyte response to insulin-like growth factor-I: The role of growth factor binding proteins. Journal of Orthopaedic Research, 1997, 15, 491-498.	1.2	171
13	N-Acetylcysteine Inhibits Post-Impact Chondrocyte Death in Osteochondral Explants. Journal of Bone and Joint Surgery - Series A, 2009, 91, 1890-1897.	1.4	114
14	Post-traumatic osteoarthritis: the role of accelerated chondrocyte senescence. Biorheology, 2004, 41, 479-91.	1.2	110
15	Effects of Oxidative Damage and Telomerase Activity on Human Articular Cartilage Chondrocyte Senescence. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2004, 59, B324-B336.	1.7	105
16	Rotenone prevents impactâ€induced chondrocyte death. Journal of Orthopaedic Research, 2010, 28, 1057-1063.	1.2	105
17	Effect of dynamic hydrostatic pressure on rabbit intervertebral disc cells. Journal of Orthopaedic Research, 2003, 21, 597-603.	1.2	103
18	Sports and osteoarthritis. Current Opinion in Rheumatology, 2004, 16, 634-639.	2.0	90

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19	Perspectives on chondrocyte mechanobiology and osteoarthritis. Biorheology, 2006, 43, 603-9.	1.2	89
20	Impact of Aging on Rat Bone Marrow-Derived Stem Cell Chondrogenesis. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2007, 62, 136-148.	1.7	80
21	Distribution and Progression of Chondrocyte Damage in a Whole-Organ Model of Human Ankle Intra-Articular Fracture. Journal of Bone and Joint Surgery - Series A, 2011, 93, 533-539.	1.4	76
22	Use of Recombinant Human Stromal Cellâ€“Derived Factor 1Î±â€“Loaded Fibrin/Hyaluronic Acid Hydrogel Networks to Achieve Functional Repair of Fullâ€Thickness Bovine Articular Cartilage Via Homing of Chondrogenic Progenitor Cells. Arthritis and Rheumatology, 2015, 67, 1274-1285.	2.9	74
23	Cocultures of Adult and Juvenile Chondrocytes Compared With Adult and Juvenile Chondral Fragments. American Journal of Sports Medicine, 2011, 39, 2355-2361.	1.9	69
24	Targeting mitochondrial responses to intra-articular fracture to prevent posttraumatic osteoarthritis. Science Translational Medicine, 2018, 10, .	5.8	69
25	Mitochondrial electron transport and glycolysis are coupled in articular cartilage. Osteoarthritis and Cartilage, 2012, 20, 323-329.	0.6	66
26	Regeneration of bone using nanoplex delivery of FGF-2 and BMP-2 genes in diaphyseal long bone radial defects in a diabetic rabbit model. Journal of Controlled Release, 2017, 248, 53-59.	4.8	66
27	Instability Dependency of Osteoarthritis Development in a Rabbit Model of Graded Anterior Cruciate Ligament Transection. Journal of Bone and Joint Surgery - Series A, 2011, 93, 640-647.	1.4	65
28	Tissue Engineering for the Temporomandibular Joint. Advanced Healthcare Materials, 2019, 8, e1801236.	3.9	65
29	Injurious Loading of Articular Cartilage Compromises Chondrocyte Respiratory Function. Arthritis and Rheumatology, 2016, 68, 662-671.	2.9	62
30	Intrinsic radiation resistance in human chondrosarcoma cells. Biochemical and Biophysical Research Communications, 2006, 346, 379-385.	1.0	57
31	The Role of Osteocytes in Targeted Bone Remodeling: A Mathematical Model. PLoS ONE, 2013, 8, e63884.	1.1	57
32	Mechanical stress and ATP synthesis are coupled by mitochondrial oxidants in articular cartilage. Journal of Orthopaedic Research, 2013, 31, 191-196.	1.2	53
33	Low-Intensity Pulsed Ultrasound Promotes Chondrogenic Progenitor Cell Migration via Focal Adhesion Kinase Pathway. Ultrasound in Medicine and Biology, 2014, 40, 1177-1186.	0.7	53
34	Oxidant conditioning protects cartilage from mechanically induced damage. Journal of Orthopaedic Research, 2010, 28, 914-920.	1.2	51
35	Selection of reference genes for normalization of quantitative real-time PCR in organ culture of the rat and rabbit intervertebral disc. BMC Research Notes, 2011, 4, 162.	0.6	48
36	Single cell sorting identifies progenitor cell population from full thickness bovine articular cartilage. Osteoarthritis and Cartilage, 2014, 22, 1318-1326.	0.6	45

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37	Oxygen effects on senescence in chondrocytes and mesenchymal stem cells: consequences for tissue engineering. Iowa orthopaedic journal, The, 2004, 24, 15-20.	0.5	43
38	Cartilage abnormalities associated with defects of chondrocytic primary cilia in Bardetâ€Biedl syndrome mutant mice. Journal of Orthopaedic Research, 2009, 27, 1093-1099.	1.2	41
39	Cytoskeletal dissolution blocks oxidant release and cell death in injured cartilage. Journal of Orthopaedic Research, 2012, 30, 593-598.	1.2	41
40	Reversible Suppression of in Vitro Biomineralization by Activation of Protein Kinase A. Journal of Biological Chemistry, 2000, 275, 11082-11091.	1.6	39
41	Comparison of T1Ï, dGEMRIC, and Quantitative T2 MRI in Preoperative ACL Rupture Patients. Academic Radiology, 2013, 20, 99-107.	1.3	39
42	Effect of Short-Term Enzymatic Treatment on Cell Migration and Cartilage Regeneration:In VitroOrgan Culture of Bovine Articular Cartilage. Tissue Engineering - Part A, 2014, 20, 1807-1814.	1.6	39
43	Automated Objective Scoring of Histologically Apparent Cartilage Degeneration Using a Custom Image Analysis Program. Journal of Orthopaedic Research, 2009, 27, 522-528.	1.2	38
44	Characteristics of meniscus progenitor cells migrated from injured meniscus. Journal of Orthopaedic Research, 2017, 35, 1966-1972.	1.2	37
45	Articular Cartilage Aging and Degeneration. Sports Medicine and Arthroscopy Review, 1996, 4, 263-275.	1.0	36
46	Human Chondrosarcoma Cells Acquire an Epithelial-Like Gene Expression Pattern via an Epigenetic Switch: Evidence for Mesenchymal-Epithelial Transition during Sarcomagenesis. Sarcoma, 2011, 2011, 1-11.	0.7	36
47	Effects of fibronectin on articular cartilage chondrocyte proteoglycan synthesis and response to insulin-like growth factor-I. Journal of Orthopaedic Research, 1998, 16, 752-757.	1.2	34
48	Gene expression profiles reveal that chondrogenic progenitor cells and synovial cells are closely related. Journal of Orthopaedic Research, 2014, 32, 981-988.	1.2	34
49	A single blunt impact on cartilage promotes fibronectin fragmentation and upregulates cartilage degrading stromelysinâ€1/matrix metalloproteinaseâ€3 in a bovine ex vivo model. Journal of Orthopaedic Research, 2014, 32, 811-818.	1.2	34
50	Comparative digital cartilage histology for human and common osteoarthritis models. Orthopedic Research and Reviews, 2013, 2013, 13.	0.7	31
51	Timeâ€dependent loss of mitochondrial function precedes progressive histologic cartilage degeneration in a rabbit meniscal destabilization model. Journal of Orthopaedic Research, 2017, 35, 590-599.	1.2	30
52	The Effect of Irrigation Solution at Different Temperatures on Articular Cartilage Metabolism. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2011, 27, 526-531.	1.3	27
53	Biocompatibility and preclinical feasibility tests of a temperatureâ€sensitive hydrogel for the purpose of surgical wound pain control and cartilage repair. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101, 1508-1515.	1.6	27
54	Inhibition of cell-matrix adhesions prevents cartilage chondrocyte death following impact injury. Journal of Orthopaedic Research, 2014, 32, 448-454.	1.2	27

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55	Fluorescent Viability Stains Overestimate Chondrocyte Viability in Osteoarticular Allografts. American Journal of Sports Medicine, 2007, 35, 1817-1823.	1.9	26
56	Effects of Telomerase and Viral Oncogene Expression on the In Vitro Growth of Human Chondrocytes. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2002, 57, B48-B53.	1.7	25
57	Rat Spinal Motion Segment in Organ Culture: A Cell Viability Study. Spine, 2006, 31, 1291-1297.	1.0	25
58	Synthesis of a novel photopolymerized nanocomposite hydrogel for treatment of acute mechanical damage to cartilage. Acta Biomaterialia, 2011, 7, 3094-3100.	4.1	25
59	Chondrogenic progenitor cells promote vascular endothelial growth factor expression through stromal-derived factor-1. Osteoarthritis and Cartilage, 2017, 25, 742-749.	0.6	22
60	Enhanced phagocytic capacity endows chondrogenic progenitor cells with a novel scavenger function within injured cartilage. Osteoarthritis and Cartilage, 2016, 24, 1648-1655.	0.6	21
61	The use of autologous adult, allogenic juvenile, and combined juvenileâ€“adult cartilage fragments for the repair of chondral defects. Knee Surgery, Sports Traumatology, Arthroscopy, 2016, 24, 3988-3996.	2.3	21
62	Targeting oxidative stress with amobarbital to prevent intervertebral disc degeneration: Part I. in vitro and ex vivo studies. Spine Journal, 2021, 21, 1021-1030.	0.6	20
63	Ultrasound-triggered PLGA microparticle destruction and degradation for controlled delivery of local cytotoxicity and drug release. International Journal of Biological Macromolecules, 2018, 106, 1211-1217.	3.6	18
64	Cartilage responses to a novel triaxial mechanostimulatory culture system. Journal of Biomechanics, 2004, 37, 689-695.	0.9	17
65	Organâ€level histological and biomechanical responses from localized osteoarticular injury in the rabbit knee. Journal of Orthopaedic Research, 2011, 29, 340-346.	1.2	17
66	Reaction-Diffusion-Delay Model for EPO/TNF-Î± Interaction in articular cartilage lesion abatement. Biology Direct, 2012, 7, 9.	1.9	17
67	Telomerase Reverse Transcriptase Subunit Expression Is Associated with Chondrosarcoma Malignancy. Clinical Orthopaedics and Related Research, 2004, 426, 117-124.	0.7	16
68	Organ culture stability of the intervertebral disc: Rat versus rabbit. Journal of Orthopaedic Research, 2013, 31, 838-846.	1.2	16
69	Complementary models reveal cellular responses to contact stresses that contribute to postâ€traumatic osteoarthritis. Journal of Orthopaedic Research, 2017, 35, 515-523.	1.2	15
70	Differential Effects of Superoxide Dismutase Mimetics after Mechanical Overload of Articular Cartilage. Antioxidants, 2017, 6, 98.	2.2	15
71	Combining ultrasound and intratumoral administration of doxorubicin-loaded microspheres to enhance tumor cell killing. International Journal of Pharmaceutics, 2018, 539, 139-146.	2.6	15
72	Matrix composition in opossum esophagus. Digestive Diseases and Sciences, 2001, 46, 968-975.	1.1	13

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73	Cartilageâ€onâ€cartilage versus metalâ€onâ€cartilage impact characteristics and responses. Journal of Orthopaedic Research, 2013, 31, 887-893.	1.2	12
74	Frequency Content of Cartilage Impact Force Signal Reflects Acute Histologic Structural Damage. Cartilage, 2012, 3, 314-322.	1.4	11
75	DAMPs Synergize with Cytokines or Fibronectin Fragment on Inducing Chondrolysis but Lose Effect When Acting Alone. Mediators of Inflammation, 2017, 2017, 1-12.	1.4	11
76	Ultrasound-Mediated Microbubble Destruction Suppresses Melanoma Tumor Growth. Ultrasound in Medicine and Biology, 2018, 44, 831-839.	0.7	11
77	Integrating carthage-specific T1rho MRI into knee clinic diagnostic imaging. Iowa orthopaedic journal, The, 2011, 31, 99-109.	0.5	11
78	Opiate regulation of IL-1Î² and TNF-Î± in cultured human articular chondrocytes. Biochemical and Biophysical Research Communications, 2005, 333, 1295-1299.	1.0	10
79	Linking Cellular and Mechanical Processes in Articular Cartilage Lesion Formation: A Mathematical Model. Frontiers in Bioengineering and Biotechnology, 2016, 4, 80.	2.0	10
80	Towards a new spatial representation of bone remodeling. Mathematical Biosciences and Engineering, 2012, 9, 281-295.	1.0	10
81	Modeling and simulation of the effects of cyclic loading on articular cartilage lesion formation. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 927-941.	1.0	9
82	Why Do Osteochondral Allografts Survive?. American Journal of Sports Medicine, 2015, 43, 2459-2468.	1.9	9
83	Sulfasalazine Resolves Joint Stiffness in a Rabbit Model of Arthrofibrosis. Journal of Orthopaedic Research, 2020, 38, 629-638.	1.2	9
84	Intra-Articular Adeno-Associated Virus-Mediated Proteoglycan 4 Gene Therapy for Preventing Posttraumatic Osteoarthritis. Human Gene Therapy, 2022, 33, 529-540.	1.4	9
85	Sliding Direction Dependence of Polyethylene Wear for Metal Counterface Traverse of Severe Scratches. Journal of Biomechanical Engineering, 2008, 130, 051006.	0.6	8
86	A Validated Model of the Pro- and Anti-Inflammatory Cytokine Balancing Act in Articular Cartilage Lesion Formation. Frontiers in Bioengineering and Biotechnology, 2015, 3, 25.	2.0	8
87	Mathematics as a conduit for translational research in postâ€traumatic osteoarthritis. Journal of Orthopaedic Research, 2017, 35, 566-572.	1.2	7
88	CD44 in Growing Normal and Neoplastic Rat Cartilage^a^b. Annals of the New York Academy of Sciences, 1996, 785, 333-336.	1.8	6
89	Spatial and temporal expression of CD44 isoforms in the developing and growing joints of the rat limb. Journal of Orthopaedic Research, 1998, 16, 100-103.	1.2	6
90	Effects of knockout of the receptor for advanced glycation endâ€products on bone mineral density and synovitis in mice with intraâ€articular fractures. Journal of Orthopaedic Research, 2018, 36, 2439-2449.	1.2	6

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91	Malignant transformation in human chondrosarcoma cells supported by telomerase activation and tumor suppressor inactivation. Cell Growth & Differentiation: the Molecular Biology Journal of the American Association for Cancer Research, 2002, 13, 397-407.	0.8	6
92	Nanog maintains human chondrocyte phenotype and function in vitro. Journal of Orthopaedic Research, 2010, 28, 516-521.	1.2	5
93	Association of chemokine expression in anterior cruciate ligament deficient knee with patient characteristics: Implications for post-traumatic osteoarthritis. Knee, 2020, 27, 36-44.	0.8	5
94	Modeling the effect of blunt impact on mitochondrial function in cartilage: implications for development of osteoarthritis. PeerJ, 2017, 5, e3468.	0.9	5
95	Migrating Progenitor Cells Derived From Injured Cartilage Surface Respond to Damage-Associated Molecular Patterns. Cartilage, 2021, , 194760352110495.	1.4	5
96	Chondrocyte senescence and telomere regulation: implications in cartilage aging and cancer (a brief) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.5	5
97	Arthroscopic lens distortion correction applied to dynamic cartilage loading. Iowa orthopaedic journal, The, 2007, 27, 52-7.	0.5	5
98	Cartilage extracellular matrix metabolism differs in serum and synovial fluid. Cytotechnology, 2002, 24, 139-143.	0.7	4
99	Imaging biopsy composition at ACL reconstruction. Orthopedic Research and Reviews, 2013, 5, 35.	0.7	4
100	Potential Mechanisms of PTA: Oxidative Stress. , 2015, , 211-219.		4
101	Targeting Cell Contractile Forces: A Novel Minimally Invasive Treatment Strategy for Fibrosis. Annals of Biomedical Engineering, 2020, 48, 1850-1862.	1.3	3
102	Loading and boundary condition influences in a poroelastic finite element model of cartilage stresses in a triaxial compression bioreactor. Iowa orthopaedic journal, The, 2006, 26, 5-16.	0.5	3
103	Objective evaluation of chondrocyte density & cloning after joint injury using convolutional neural networks. Journal of Orthopaedic Research, 2022, , .	1.2	3
104	Articular Cartilage Biology. , 2012, , 685-692.		2
105	HPLC-UV Method Validation for Amobarbital and Pharmaceutical Stability Evaluation When Dispersed in a Hyaluronic Acid Hydrogel: A New Concept for Post-Traumatic Osteoarthritis Prevention. Journal of Pharmaceutical Sciences, 2022, 111, 1379-1390.	1.6	1
106	Force-Bioreactor for Assessing Pharmacological Therapies for Mechanobiological Targets. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	1
107	Early OA Following Synovial Joint Fracture. , 2022, , 103-119.		0
108	Oxidative Conditioning and Treatment for Osteoarthritis. , 2013, , 311-332.		0