Devakar R Epari

List of Publications by Year
in descending order

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		218592	197736
49 papers	3,418 citations	26 h-index	49 g-index
50 all docs	50 docs citations	50 times ranked	4410 citing authors

#	Article	IF	Citations
1	Bone Regeneration Based on Tissue Engineering Conceptions â€” A 21st Century Perspective. Bone Research, 2013, 1, 216-248.	5.4	625
2	The challenge of establishing preclinical models for segmental bone defect research. Biomaterials, 2009, 30, 2149-2163.	5.7	351
3	A Tissue Engineering Solution for Segmental Defect Regeneration in Load-Bearing Long Bones. Science Translational Medicine, 2012, 4, 141ra93.	5.8	301
4	The course of bone healing is influenced by the initial shear fixation stability. Journal of Orthopaedic Research, 2005, 23, 1022-1028.	1.2	173
5	The patella morphology in trochlear dysplasia â€” A comparative MRI study. Knee, 2006, 13, 145-150.	0.8	144
6	Instability prolongs the chondral phase during bone healing in sheep. Bone, 2006, 38, 864-870.	1.4	126
7	Polycaprolactone scaffold and reduced rhBMP-7 dose for the regeneration of critical-sized defects in sheep tibiae. Biomaterials, 2013, 34, 9960-9968.	5.7	120
8	Spatial and temporal variations of mechanical properties and mineral content of the external callus during bone healing. Bone, 2009, 45, 185-192.	1.4	114
9	Osteoclastic activity begins early and increases over the course of bone healing. Bone, 2006, 38, 547-554.	1.4	106
10	Timely Fracture-Healing Requires Optimization of Axial Fixation Stability. Journal of Bone and Joint Surgery - Series A, 2007, 89, 1575-1585.	1.4	106
11	Mechanical conditions in the initial phase of bone healing. Clinical Biomechanics, 2006, 21, 646-655.	0.5	90
12	Autologous vs. allogenic mesenchymal progenitor cells for the reconstruction of critical sized segmental tibial bone defects in aged sheep. Acta Biomaterialia, 2013, 9, 7874-7884.	4.1	90
13	Timely Fracture-Healing Requires Optimization of Axial Fixation Stability. Journal of Bone and Joint Surgery - Series A, 2007, 89, 1575-1585.	1.4	90
14	Influence of Scaffold Stiffness on Subchondral Bone and Subsequent Cartilage Regeneration in an Ovine Model of Osteochondral Defect Healing. American Journal of Sports Medicine, 2008, 36, 2379-2391.	1.9	78
15	Establishment of a Preclinical Ovine Model for Tibial Segmental Bone Defect Repair by Applying Bone Tissue Engineering Strategies. Tissue Engineering - Part B: Reviews, 2010, 16, 93-104.	2.5	76
16	A new approach for assigning bone material properties from CT images into finite element models. Journal of Biomechanics, 2010, 43, 1011-1015.	0.9	75
17	Mechanobiology of bone healing and regeneration:<i>in vivo</i>models. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2010, 224, 1543-1553.	1.0	67
18	Size and habit of mineral particles in bone and mineralized callus during bone healing in sheep. Journal of Bone and Mineral Research, 2010, 25, 2029-2038.	3.1	61

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19	Pressure, oxygen tension and temperature in the periosteal callus during bone healingâ€"An in vivo study in sheep. Bone, 2008, 43, 734-739.	1.4	55
20	CYR61 (CCN1) Protein Expression during Fracture Healing in an Ovine Tibial Model and Its Relation to the Mechanical Fixation Stability. Journal of Orthopaedic Research, 2006, 24, 254-262.	1.2	46
21	Modulation of fixation stiffness from flexible to stiff in a rat model of bone healing. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 88, 217-222.	1.2	45
22	Mechanical Behavior of Articular Cartilage after Osteochondral Autograft Transfer in an Ovine Model. American Journal of Sports Medicine, 2007, 35, 555-563.	1.9	44
23	Biaxial cell stimulation: A mechanical validation. Journal of Biomechanics, 2009, 42, 1692-1696.	0.9	39
24	Temporal tissue patterns in bone healing of sheep. Journal of Orthopaedic Research, 2010, 28, 1440-1447.	1.2	36
25	Stress Shielding in Box and Cylinder Cervical Interbody Fusion Cage Designs. Spine, 2005, 30, 908-914.	1.0	34
26	Early mechanical stimulation only permits timely bone healing in sheep. Journal of Orthopaedic Research, 2018, 36, 1790-1796.	1.2	30
27	Scaffold-guided bone regeneration in large volume tibial segmental defects. Bone, 2021, 153, 116163.	1.4	29
28	The mechanical heterogeneity of the hard callus influences local tissue strains during bone healing: A finite element study based on sheep experiments. Journal of Biomechanics, 2011, 44, 517-523.	0.9	28
29	Mechanical evaluation of a new minimally invasive device for stabilization of proximal humeral fractures in elderly patients A cadaver study. Monthly Notices of the Royal Astronomical Society: Letters, 2007, 78, 430-435.	1.2	23
30	A case for optimising fracture healing through inverse dynamization. Medical Hypotheses, 2013, 81, 225-227.	0.8	23
31	Risk Factors for Knee Injury in Golf: A Systematic Review. Sports Medicine, 2017, 47, 2621-2639.	3.1	17
32	Monitoring Healing Progression and Characterizing the Mechanical Environment in Preclinical Models for Bone Tissue Engineering. Tissue Engineering - Part B: Reviews, 2016, 22, 47-57.	2.5	15
33	Biphasic plating improves the mechanical performance of locked plating for distal femur fractures. Journal of Biomechanics, 2021, 115, 110192.	0.9	15
34	Comparison of mechanical and ultrasound elastic modulus of ovine tibial cortical bone. Medical Engineering and Physics, 2014, 36, 869-874.	0.8	14
35	Endochondral ossification in vitro is influenced by mechanical bending. Bone, 2007, 40, 597-603.	1.4	13
36	<i>In vitro</i>models for bone mechanobiology: Applications in bone regeneration and tissue engineering. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2010, 224, 1533-1541.	1.0	13

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37	Computational simulation of bone fracture healing under inverse dynamisation. Biomechanics and Modeling in Mechanobiology, 2017, 16, 5-14.	1.4	12
38	Mechanical testing of internal fixation devices: A theoretical and practical examination of current methods. Journal of Biomechanics, 2015, 48, 3989-3994.	0.9	11
39	Effects of strain artefacts arising from a pre-defined callus domain in models of bone healing mechanobiology. Biomechanics and Modeling in Mechanobiology, 2015, 14, 1129-1141.	1.4	11
40	A cadaveric biomechanical study comparing the ease of femoral nail insertion: 1.0- vs 1.5-m bow designs. Archives of Orthopaedic and Trauma Surgery, 2017, 137, 663-671.	1.3	10
41	Can Optimizing the Mechanical Environment Deliver a Clinically Significant Reduction in Fracture Healing Time?. Biomedicines, 2021, 9, 691.	1.4	10
42	Biphasic Plating â€“ In vivo study of a novel fixation concept to enhance mechanobiological fracture healing. Injury, 2020, 51, 1751-1758.	0.7	9
43	Programable Active Fixator System for Systematic In Vivo Investigation of Bone Healing Processes. Sensors, 2021, 21, 17.	2.1	7
44	Mechanical tension as a driver of connective tissue growth in vitro. Medical Hypotheses, 2014, 83, 111-115.	0.8	5
45	Short-Term Bone Healing Response to Mechanical Stimulationâ€"A Case Series Conducted on Sheep. Biomedicines, 2021, 9, 988.	1.4	5
46	Development of Surgical Tools and Procedures for Experimental Preclinical Surgery Using Computer Simulations And 3D Printing. International Journal of Online and Biomedical Engineering, 2020, 16, 183.	0.9	3
47	Can the contra-lateral limb be used as a control with respect to analyses of bone remodelling?. Medical Engineering and Physics, 2011, 33, 987-992.	0.8	2
48	Morphology of bony callus growth in healing of a sheep tibial osteotomy. Injury, 2021, 52, 66-70.	0.7	1
49	A model for integrating clinical care and basic science research, and pitfalls of performing complex research projects for addressing a clinical challenge. Injury, 2010, 41, S14-S15.	0.7	0