

# Georg Duda

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/1247280/georg-duda-publications-by-year.pdf>

**Version:** 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

485  
papers

21,578  
citations

74  
h-index

126  
g-index

547  
ext. papers

25,355  
ext. citations

5.2  
avg, IF

6.84  
L-index

#	Paper	IF	Citations
485	The calcitonin receptor protects against bone loss and excessive inflammation in collagen antibody-induced arthritis.. <i>IScience</i> , <b>2022</b> , 25, 103689	6.1	0
484	Histological Processing of CAD/CAM Titanium Scaffold after Long-Term Failure in Cranioplasty.. <i>Materials</i> , <b>2022</b> , 15,	3.5	1
483	Intramuscular and intratendinous placenta-derived mesenchymal stromal-like cell treatment of a chronic quadriceps tendon rupture.. <i>Journal of Cachexia, Sarcopenia and Muscle</i> , <b>2022</b> ,	10.3	1
482	Reproducibility, Relevance and Reliability as Barriers to Efficient and Credible Biomedical Technology Translation.. <i>Advanced Drug Delivery Reviews</i> , <b>2022</b> , 182, 114118	18.5	4
481	MIF does only marginally enhance the pro-regenerative capacities of DFO in a mouse-osteotomy-model of compromised bone healing conditions. <i>Bone</i> , <b>2022</b> , 154, 116247	4.7	1
480	Enabling technologies towards personalization of scaffolds for large bone defect regeneration.. <i>Current Opinion in Biotechnology</i> , <b>2022</b> , 74, 263-270	11.4	0
479	Loading of the Knee Joint After Total Knee Arthroplasty <b>2022</b> , 65-76		
478	Overstretching Expectations May Endanger the Success of the "Millennium Surgery".. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2022</b> , 10, 789629	5.8	
477	The Recovery of Weight-Bearing Symmetry After Total Hip Arthroplasty Is Activity-Dependent.. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2022</b> , 10, 813345	5.8	
476	The Degradation of Synthetic Polymeric Scaffolds With Strut-like Architecture Influences the Mechanics-dependent Repair Process of an Osteochondral Defect .. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2022</b> , 10, 846665	5.8	
475	Ground reaction forces and external hip joint moments predict in vivo hip contact forces during gait.. <i>Journal of Biomechanics</i> , <b>2022</b> , 135, 111037	2.9	0
474	Treatment options for critical size defects - Comparison of different materials in a calvaria split model in sheep <b>2022</b> , 212788		2
473	Source and Hub of Inflammation - The Infrapatellar Fat Pad and its Interactions with Articular Tissues during Knee Osteoarthritis.. <i>Journal of Orthopaedic Research</i> , <b>2022</b> ,	3.8	1
472	In vivo microCT-based time-lapse morphometry reveals anatomical site-specific differences in bone (re)modeling serving as baseline parameters to detect early pathological events.. <i>Bone</i> , <b>2022</b> , 116432	4.7	0
471	A Comparison of Solvent-Based Extraction Methods to Assess the Central Carbon Metabolites in Mouse Bone and Muscle. <i>Metabolites</i> , <b>2022</b> , 12, 453	5.6	
470	Biomechanical Evaluation of WE43 Magnesium Plates for Mandibular Fracture Fixation.. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 803103	5.8	0
469	Retention of Posterior Cruciate Ligament Alone May Not Achieve Physiological Knee Joint Kinematics After Total Knee Arthroplasty: A Retrospective Study. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2021</b> , 103, 146-154	5.6	3

468	Patient-specific resurfacing implant knee surgery in subjects with early osteoarthritis results in medial pivot and lateral femoral rollback during flexion: a retrospective pilot study. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2021</b> , 1	5.5	0
467	A Higher Initial Tensioning Force of an ACL Graft Results in a Higher Graft Force After Screw Fixation Irrespective of the Screw Diameter: A Biomechanical Study. <i>American Journal of Sports Medicine</i> , <b>2021</b> , 49, 3825-3832	6.8	1
466	Dynamic Knee Joint Line Orientation Is Not Predictive of Tibio-Femoral Load Distribution During Walking. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 754715	5.8	
465	Knieendoprothetik: Biomechanik des Kniegelenks. <i>Springer Reference Medizin</i> , <b>2021</b> , 1-18	0	
464	Public Interest in Knee Pain and Knee Replacement during the SARS-CoV-2 Pandemic in Western Europe. <i>Journal of Clinical Medicine</i> , <b>2021</b> , 10,	5.1	2
463	Biomechanical models: key considerations in study design. <i>OTA International the Open Access Journal of Orthopaedic Trauma</i> , <b>2021</b> , 4, e099	0.9	1
462	Prevention of Bone Destruction by Mechanical Loading Is Not Enhanced by the Bruton's Tyrosine Kinase Inhibitor CC-292 in Myeloma Bone Disease. <i>International Journal of Molecular Sciences</i> , <b>2021</b> , 22,	6.3	1
461	Quantification of morning stiffness to assess disease activity and treatment effects in rheumatoid arthritis. <i>Rheumatology</i> , <b>2021</b> , 60, 5282-5291	3.9	0
460	Biomechanical Assessment of the Validity of Sheep as a Preclinical Model for Testing Mandibular Fracture Fixation Devices. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 672176	5.8	2
459	Bursa-Derived Cells Show a Distinct Mechano-Response to Physiological and Pathological Loading. <i>Frontiers in Cell and Developmental Biology</i> , <b>2021</b> , 9, 657166	5.7	1
458	Bone morphogenetic protein 2-induced cellular chemotaxis drives tissue patterning during critical-sized bone defect healing: an in silico study. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2021</b> , 20, 1627-1644	3.8	2
457	The multifaceted roles of macrophages in bone regeneration: A story of polarization, activation and time. <i>Acta Biomaterialia</i> , <b>2021</b> , 133, 46-57	10.8	15
456	Gait Adaptations at 8 Years After Reconstruction of Unilateral Isolated and Combined Posterior Cruciate Ligament Injuries. <i>American Journal of Sports Medicine</i> , <b>2021</b> , 49, 2416-2425	6.8	0
455	Is initial interfragmentary compression made to last? An ovine bone in vitro study. <i>Injury</i> , <b>2021</b> , 52, 1263-1270	3.7	0
454	Initial mechanical conditions within an optimized bone scaffold do not ensure bone regeneration - an in silico analysis. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2021</b> , 20, 1723-1731	3.8	4
453	Proinflammatory and bone protective role of calcitonin gene-related peptide alpha in collagen antibody-induced arthritis. <i>Rheumatology</i> , <b>2021</b> , 60, 1996-2009	3.9	2
452	Mechanical loading prevents bone destruction and exerts anti-tumor effects in the MOPC315.BM.Luc model of myeloma bone disease. <i>Acta Biomaterialia</i> , <b>2021</b> , 119, 247-258	10.8	7
451	Mechanobiological Principles Influence the Immune Response in Regeneration: Implications for Bone Healing. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 614508	5.8	4

450	Scaffold-Dependent Mechanical and Architectural Cues Guide Osteochondral Defect Healing. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 642217	5.8	1
449	Association of Machine Learning-Based Predictions of Medial Knee Contact Force With Cartilage Loss Over 2.5 Years in Knee Osteoarthritis. <i>Arthritis and Rheumatology</i> , <b>2021</b> , 73, 1638-1645	9.5	6
448	Surgical cup placement affects the heating up of total joint hip replacements. <i>Scientific Reports</i> , <b>2021</b> , 11, 15851	4.9	2
447	Improved in vivo osseointegration and degradation behavior of PEO surface-modified WE43 magnesium plates and screws after 6 and 12 months. <i>Materials Science and Engineering C</i> , <b>2021</b> , 129, 112380	8.3	5
446	Role of extracellular matrix structural components and tissue mechanics in the development of postoperative pancreatic fistula. <i>Journal of Biomechanics</i> , <b>2021</b> , 128, 110714	2.9	2
445	Cortical bone adaptation to a moderate level of mechanical loading in male Sost deficient mice. <i>Scientific Reports</i> , <b>2020</b> , 10, 22299	4.9	2
444	Mechano-Biological Computer Model of Scaffold-Supported Bone Regeneration: Effect of Bone Graft and Scaffold Structure on Large Bone Defect Tissue Patterning. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 585799	5.8	12
443	Significant Loss of ACL Graft Force With Tibial-Sided Soft Tissue Interference Screw Fixation Over 24 Hours: A Biomechanical Study. <i>Orthopaedic Journal of Sports Medicine</i> , <b>2020</b> , 8, 2325967120916437	3.5	1
442	Mesenchymal stromal cell and bone marrow concentrate therapies for musculoskeletal indications: a concise review of current literature. <i>Molecular Biology Reports</i> , <b>2020</b> , 47, 4789-4814	2.8	13
441	Is Laminae Cartilage Composition as Determined by T2 Relaxometry Associated with Incident and Worsening of Cartilage or Bone Marrow Abnormalities?. <i>Cartilage</i> , <b>2020</b> , 1947603520932197	3	1
440	Hybrid Injectable Sol-Gel Systems Based on Thermo-Sensitive Polyurethane Hydrogels Carrying pH-Sensitive Mesoporous Silica Nanoparticles for the Controlled and Triggered Release of Therapeutic Agents. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 384	5.8	12
439	Immersion of Achilles tendon in phosphate-buffered saline influences T and T * relaxation times: An ex vivo study. <i>NMR in Biomedicine</i> , <b>2020</b> , 33, e4288	4.4	1
438	Engineered pH-Responsive Mesoporous Carbon Nanoparticles for Drug Delivery. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 14946-14957	9.5	27
437	Limbostomy: Longitudinal Intravital Microendoscopy in Murine Osteotomies. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , <b>2020</b> , 97, 483-495	4.6	2
436	Mesenchymal Stromal Cell-Based Therapy-An Alternative to Arthroplasty for the Treatment of Osteoarthritis? A State of the Art Review of Clinical Trials. <i>Journal of Clinical Medicine</i> , <b>2020</b> , 9,	5.1	1
435	Alginate Hydrogels for Bone Regeneration: The Immune Competence of the Animal Model Matters. <i>Tissue Engineering - Part A</i> , <b>2020</b> , 26, 852-862	3.9	14
434	Evaluation of 3D Printed Gelatin-Based Scaffolds with Varying Pore Size for MSC-Based Adipose Tissue Engineering. <i>Macromolecular Bioscience</i> , <b>2020</b> , 20, e1900364	5.5	24
433	Longitudinal Change in Knee Cartilage Thickness and Function in Subjects with and without MRI-Diagnosed Cartilage Damage. <i>Cartilage</i> , <b>2020</b> , 1947603520980157	3	2

432	Spatio-Temporal Bone Remodeling after Hematopoietic Stem Cell Transplantation. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 22,	6.3	1
431	Load, Alignment, and Wear <b>2020</b> , 19-26		
430	Longitudinal changes in location-specific cartilage thickness and T2 relaxation-times after posterior cruciate ligament reconstruction for isolated and multiligament injury. <i>Clinical Biomechanics</i> , <b>2020</b> , 79, 104935	2.2	4
429	Effects of Long-Term Sclerostin Deficiency on Trabecular Bone Mass and Adaption to Limb Loading Differ in Male and Female Mice. <i>Calcified Tissue International</i> , <b>2020</b> , 106, 415-430	3.9	6
428	Niche-mimicking interactions in peptide-functionalized 3D hydrogels amplify mesenchymal stromal cell paracrine effects. <i>Biomaterials</i> , <b>2020</b> , 230, 119639	15.6	21
427	Frequencies of MRI-detected structural pathology in knees without radiographic OA and worsening over three years: How relevant is contralateral radiographic osteoarthritis?. <i>Osteoarthritis and Cartilage Open</i> , <b>2020</b> , 1, 100014	1.5	4
426	Vascular bioprinting with enzymatically degradable bioinks via multi-material projection-based stereolithography. <i>Acta Biomaterialia</i> , <b>2020</b> , 117, 121-132	10.8	27
425	Quantifying Asymmetry in Gait: The Weighted Universal Symmetry Index to Evaluate 3D Ground Reaction Forces. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 579511	5.8	6
424	Muscle Fascicles Exhibit Limited Passive Elongation Throughout the Rehabilitation of Achilles Tendon Rupture After Percutaneous Repair. <i>Frontiers in Physiology</i> , <b>2020</b> , 11, 746	4.6	2
423	Dual alginate crosslinking for local patterning of biophysical and biochemical properties. <i>Acta Biomaterialia</i> , <b>2020</b> , 115, 185-196	10.8	7
422	Metal-Specific Biomaterial Accumulation in Human Peri-Implant Bone and Bone Marrow. <i>Advanced Science</i> , <b>2020</b> , 7, 2000412	13.6	16
421	The neuropeptide calcitonin gene-related peptide alpha is essential for bone healing. <i>EBioMedicine</i> , <b>2020</b> , 59, 102970	8.8	12
420	Validation of reference genes for expression analysis in a murine trauma model combining traumatic brain injury and femoral fracture. <i>Scientific Reports</i> , <b>2020</b> , 10, 15057	4.9	3
419	In Vivo Validation of Spray-Dried Mesoporous Bioactive Glass Microspheres Acting as Prolonged Local Release Systems for BMP-2 to Support Bone Regeneration. <i>Pharmaceutics</i> , <b>2020</b> , 12,	6.4	7
418	Towards multi-dynamic mechano-biological optimization of 3D-printed scaffolds to foster bone regeneration. <i>Acta Biomaterialia</i> , <b>2020</b> , 101, 117-127	10.8	19
417	Early pH Changes in Musculoskeletal Tissues upon Injury-Aerobic Catabolic Pathway Activity Linked to Inter-Individual Differences in Local pH. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,	6.3	8
416	Extrusion Printed Scaffolds with Varying Pore Size As Modulators of MSC Angiogenic Paracrine Effects. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 5348-5358	5.5	11
415	Association between changes in molecular biomarkers of cartilage matrix turnover and changes in knee articular cartilage: a longitudinal pilot study. <i>Journal of Experimental Orthopaedics</i> , <b>2019</b> , 6, 19	2.3	8

414	Individual Effector/Regulator T Cell Ratios Impact Bone Regeneration. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 1954	8.4	25
413	Locking plate constructs benefit from interfragmentary lag screw fixation with decreased shear movements and more predictable fracture gap motion in simple fracture patterns. <i>Clinical Biomechanics</i> , <b>2019</b> , 70, 89-96	2.2	4
412	Tibio-Femoral Contact Force Distribution is Not the Only Factor Governing Pivot Location after Total Knee Arthroplasty. <i>Scientific Reports</i> , <b>2019</b> , 9, 182	4.9	5
411	Anatomic grooved stem mitigates strain shielding compared to established total hip arthroplasty stem designs in finite-element models. <i>Scientific Reports</i> , <b>2019</b> , 9, 482	4.9	8
410	Age-Related Changes in the Mechanical Regulation of Bone Healing Are Explained by Altered Cellular Mechanoresponse. <i>Journal of Bone and Mineral Research</i> , <b>2019</b> , 34, 1923-1937	6.3	14
409	Knochenbruchheilung und klinische Belastungsstabilität. <i>OP-Journal</i> , <b>2019</b> , 35, 12-19	0	1
408	Enzymatically-degradable alginate hydrogels promote cell spreading and in vivo tissue infiltration. <i>Biomaterials</i> , <b>2019</b> , 217, 119294	15.6	53
407	Oxidized alginate beads for tunable release of osteogenically potent mesenchymal stromal cells. <i>Materials Science and Engineering C</i> , <b>2019</b> , 104, 109911	8.3	5
406	Dynamics of postural control in individuals with ankle instability: Effect of visual input and orthotic use. <i>Computers in Biology and Medicine</i> , <b>2019</b> , 110, 120-126	7	2
405	From macroscopic mechanics to cell-effective stiffness within highly aligned macroporous collagen scaffolds. <i>Materials Science and Engineering C</i> , <b>2019</b> , 103, 109760	8.3	5
404	Impact of Gentamicin-Loaded Bone Graft on Defect Healing in a Sheep Model. <i>Materials</i> , <b>2019</b> , 12,	3.5	8
403	ESB Clinical Biomechanics Award 2018: Muscle atrophy-related increased joint loading after total hip arthroplasty and their postoperative change from 3 to 50 months. <i>Clinical Biomechanics</i> , <b>2019</b> , 65, 105-109	2.2	6
402	Immune Modulation to Enhance Bone Healing-A New Concept to Induce Bone Using Prostacyclin to Locally Modulate Immunity. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 713	8.4	20
401	Experience in the Adaptive Immunity Impacts Bone Homeostasis, Remodeling, and Healing. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 797	8.4	30
400	Treatment of osteochondral defects: chondrointegration of metal implants improves after hydroxyapatite coating. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2019</b> , 27, 3575-3582	5.5	9
399	Cell therapy to improve regeneration of skeletal muscle injuries. <i>Journal of Cachexia, Sarcopenia and Muscle</i> , <b>2019</b> , 10, 501-516	10.3	53
398	Collagen Fibrils Mechanically Contribute to Tissue Contraction in an In Vitro Wound Healing Scenario. <i>Advanced Science</i> , <b>2019</b> , 6, 1801780	13.6	28
397	Biologie und Biomechanik der Frakturheilung und Osteosynthese. <i>Orthopädie Und Unfallchirurgie Update</i> , <b>2019</b> , 14, 163-183	0.1	1

396	Alterations in structure of the muscle-tendon unit and gait pattern after percutaneous repair of Achilles tendon rupture with the Dresden instrument. <i>Foot and Ankle Surgery</i> , <b>2019</b> , 25, 529-533	3.1	6
395	Integrated additive design and manufacturing approach for the bioengineering of bone scaffolds for favorable mechanical and biological properties. <i>Biomedical Materials (Bristol)</i> , <b>2019</b> , 14, 065002	3.5	12
394	Load-induced osteogenic differentiation of mesenchymal stromal cells is caused by mechano-regulated autocrine signaling. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2019</b> , 13, 1992-2008	4.4	25
393	Radiographically normal knees with contralateral joint space narrowing display greater change in cartilage transverse relaxation time than those with normal contralateral knees: a model of early OA? - data from the Osteoarthritis Initiative (OAI). <i>Osteoarthritis and Cartilage</i> , <b>2019</b> , 27, 1663-1668	6.2	10
392	Weight Bearing Activities change the Pivot Position after Total Knee Arthroplasty. <i>Scientific Reports</i> , <b>2019</b> , 9, 9148	4.9	5
391	T and T mapping of the human quadriceps and patellar tendons using ultra-short echo-time (UTE) imaging and bivariate relaxation parameter-based volumetric visualization. <i>Magnetic Resonance Imaging</i> , <b>2019</b> , 63, 29-36	3.3	5
390	Baseline structural tissue pathology is not strongly associated with longitudinal change in transverse relaxation time (T2) in knees without osteoarthritis. <i>European Journal of Radiology</i> , <b>2019</b> , 118, 161-168	4.7	3
389	Bioactive coating of zirconia toughened alumina ceramic implants improves cancellous osseointegration. <i>Scientific Reports</i> , <b>2019</b> , 9, 16692	4.9	20
388	Compromised Bone Healing in Aged Rats Is Associated With Impaired M2 Macrophage Function. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 2443	8.4	24
387	Multi-Parameter Analysis of Biobanked Human Bone Marrow Stromal Cells Shows Little Influence for Donor Age and Mild Comorbidities on Phenotypic and Functional Properties. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 2474	8.4	33
386	Spatial Distribution of Macrophages During Callus Formation and Maturation Reveals Close Crosstalk Between Macrophages and Newly Forming Vessels. <i>Frontiers in Immunology</i> , <b>2019</b> , 10, 2588	8.4	16
385	Validation of a Novel Device for the Knee Monitoring of Orthopaedic Patients. <i>Sensors</i> , <b>2019</b> , 19,	3.8	10
384	Normal trabecular vertebral bone is formed via rapid transformation of mineralized spicules: A high-resolution 3D ex-vivo murine study. <i>Acta Biomaterialia</i> , <b>2019</b> , 86, 429-440	10.8	3
383	Collagen I-based scaffolds negatively impact fracture healing in a mouse-osteotomy-model although used routinely in research and clinical application. <i>Acta Biomaterialia</i> , <b>2019</b> , 86, 171-184	10.8	18
382	Cartilage loss in radiographically normal knees depends on radiographic status of the contralateral knee - data from the Osteoarthritis Initiative. <i>Osteoarthritis and Cartilage</i> , <b>2019</b> , 27, 273-277	6.2	12
381	Macrophages in bone fracture healing: Their essential role in endochondral ossification. <i>Bone</i> , <b>2018</b> , 106, 78-89	4.7	25 <sup>0</sup>
380	deficiency leads to reduced mechanical strains at the tibia midshaft in strain-matched loading experiments in mice. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	7
379	The Metabolic Microenvironment Steers Bone Tissue Regeneration. <i>Trends in Endocrinology and Metabolism</i> , <b>2018</b> , 29, 99-110	8.8	28

378	Rapid detection of periprosthetic joint infection using a combination of 16s rDNA polymerase chain reaction and lateral flow immunoassay: A Pilot Study. <i>Bone and Joint Research</i> , <b>2018</b> , 7, 12-19	4.2	22
377	Mechanobiologically optimized 3D titanium-mesh scaffolds enhance bone regeneration in critical segmental defects in sheep. <i>Science Translational Medicine</i> , <b>2018</b> , 10,	17.5	117
376	The Interaction of BMP2-Induced Defect Healing in Rat and Fixator Stiffness Modulates Matrix Alignment and Contraction. <i>JBMR Plus</i> , <b>2018</b> , 2, 174-186	3.9	5
375	Clinical and Research Approaches to Treat Non-union Fracture. <i>Current Osteoporosis Reports</i> , <b>2018</b> , 16, 155-168	5.4	35
374	Short-term functional assessment of gait, plantarflexor strength, and tendon properties after Achilles tendon rupture. <i>Gait and Posture</i> , <b>2018</b> , 62, 179-185	2.6	10
373	Loss of the Hematopoietic Stem Cell Factor GATA2 in the Osteogenic Lineage Impairs Trabecularization and Mechanical Strength of Bone. <i>Molecular and Cellular Biology</i> , <b>2018</b> , 38,	4.8	8
372	Tubular open-porous tricalcium phosphate polycaprolactone scaffolds as guiding structure for segmental bone defect regeneration in a novel sheep model. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, 897-911	4.4	15
371	Mechanosensation across borders: fibroblasts inside a macroporous scaffold sense and respond to the mechanical environment beyond the scaffold walls. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, 265-275	4.4	3
370	Modifications of femoral component design in multi-radius total knee arthroplasty lead to higher lateral posterior femoro-tibial translation. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2018</b> , 26, 1645-1655	5.5	26
369	Correlations between nanostructure and micromechanical properties of healing bone. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2018</b> , 77, 258-266	4.1	15
368	A review of biomaterials in bone defect healing, remaining shortcomings and future opportunities for bone tissue engineering: The unsolved challenge. <i>Bone and Joint Research</i> , <b>2018</b> , 7, 232-243	4.2	219
367	Hydrolytically-degradable click-crosslinked alginate hydrogels. <i>Biomaterials</i> , <b>2018</b> , 181, 189-198	15.6	43
366	Immunology Guides Skeletal Muscle Regeneration. <i>International Journal of Molecular Sciences</i> , <b>2018</b> , 19,	6.3	44
365	Physiological joint line total knee arthroplasty designs are especially sensitive to rotational placement - A finite element analysis. <i>PLoS ONE</i> , <b>2018</b> , 13, e0192225	3.7	8
364	Leptin-deficiency eradicates the positive effect of traumatic brain injury on bone healing: histological analyses in a combined trauma mouse model. <i>Journal of Musculoskeletal Neuronal Interactions</i> , <b>2018</b> , 18, 32-41	1.3	9
363	Impact of antagonistic muscle co-contraction on in vivo knee contact forces. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2018</b> , 15, 101	5.3	18
362	Loading of the hip and knee joints during whole body vibration training. <i>PLoS ONE</i> , <b>2018</b> , 13, e0207014	3.7	11
361	Evaluation of the accuracy of musculoskeletal simulation during squats by means of instrumented knee prostheses. <i>Medical Engineering and Physics</i> , <b>2018</b> , 61, 95-99	2.4	17



360	Dosage and composition of bioactive glasses differentially regulate angiogenic and osteogenic response of human MSCs. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2018</b> , 106, 2827-2837	5.4	11
359	Physical Activities That Cause High Friction Moments at the Cup in Hip Implants. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2018</b> , 100, 1637-1644	5.6	15
358	A biomaterial with a channel-like pore architecture induces endochondral healing of bone defects. <i>Nature Communications</i> , <b>2018</b> , 9, 4430	17.4	81
357	Immunomodulatory placental-expanded, mesenchymal stromal cells improve muscle function following hip arthroplasty. <i>Journal of Cachexia, Sarcopenia and Muscle</i> , <b>2018</b> , 9, 880-897	10.3	36
356	Optimization of cell-laden bioinks for 3D bioprinting and efficient infection with influenza A virus. <i>Scientific Reports</i> , <b>2018</b> , 8, 13877	4.9	74
355	Unraveling local tissue changes within severely injured skeletal muscles in response to MSC-based intervention using MALDI Imaging mass spectrometry. <i>Scientific Reports</i> , <b>2018</b> , 8, 12677	4.9	13
354	Sclerostin Neutralizing Antibody Treatment Enhances Bone Formation but Does Not Rescue Mechanically Induced Delayed Healing. <i>Journal of Bone and Mineral Research</i> , <b>2018</b> , 33, 1686-1697	6.3	15
353	From Improved Diagnostics to Presurgical Planning: High-Resolution Functionally Graded Multimaterial 3D Printing of Biomedical Tomographic Data Sets. <i>3D Printing and Additive Manufacturing</i> , <b>2018</b> , 5, 103-113	4	19
352	OVERLOAD of joints and its role in osteoarthritis : Towards understanding and preventing progression of primary osteoarthritis. English version. <i>Zeitschrift Fur Rheumatologie</i> , <b>2017</b> , 76, 1-4	1.9	1
351	High-dose recombinant human bone morphogenetic protein-2 impacts histological and biomechanical properties of a cervical spine fusion segment: results from a sheep model. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2017</b> , 11, 1514-1523	4.4	10
350	Muscle and tendon adaptation in adolescent athletes: A longitudinal study. <i>Scandinavian Journal of Medicine and Science in Sports</i> , <b>2017</b> , 27, 75-82	4.6	40
349	MRI findings of knee abnormalities in adolescent and adult volleyball players. <i>Journal of Experimental Orthopaedics</i> , <b>2017</b> , 4, 6	2.3	11
348	Tomography-Based Quantification of Regional Differences in Cortical Bone Surface Remodeling and Mechano-Response. <i>Calcified Tissue International</i> , <b>2017</b> , 100, 255-270	3.9	26
347	The haematoma and its role in bone healing. <i>Journal of Experimental Orthopaedics</i> , <b>2017</b> , 4, 5	2.3	80
346	Strain shielding inspired re-design of proximal femoral stems for total hip arthroplasty. <i>Journal of Orthopaedic Research</i> , <b>2017</b> , 35, 2534-2544	3.8	23
345	Deminerlized Bone Matrix as a Carrier for Bone Morphogenetic Protein-2: Burst Release Combined with Long-Term Binding and Osteoinductive Activity Evaluated In Vitro and In Vivo. <i>Tissue Engineering - Part A</i> , <b>2017</b> , 23, 1321-1330	3.9	23
344	Differences in biomarkers of cartilage matrix turnover and their changes over 2 years in adolescent and adult volleyball athletes. <i>Journal of Experimental Orthopaedics</i> , <b>2017</b> , 4, 7	2.3	8
343	Longitudinal change in patellofemoral cartilage thickness, cartilage T2 relaxation times, and subchondral bone plate area in adolescent vs mature athletes. <i>European Journal of Radiology</i> , <b>2017</b> , 92, 24-29	4.7	6

342	Biomaterials that promote cell-cell interactions enhance the paracrine function of MSCs. <i>Biomaterials</i> , <b>2017</b> , 140, 103-114	15.6	137
341	Comparison of the effects of 45S5 and 1393 bioactive glass microparticles on hMSC behavior. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2017</b> , 105, 2772-2782	5.4	28
340	Substrate Stress-Relaxation Regulates Scaffold Remodeling and Bone Formation In Vivo. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1601185	10.1	68
339	Surface Curvature Differentially Regulates Stem Cell Migration and Differentiation via Altered Attachment Morphology and Nuclear Deformation. <i>Advanced Science</i> , <b>2017</b> , 4, 1600347	13.6	128
338	CD31+ Cells From Peripheral Blood Facilitate Bone Regeneration in Biologically Impaired Conditions Through Combined Effects on Immunomodulation and Angiogenesis. <i>Journal of Bone and Mineral Research</i> , <b>2017</b> , 32, 902-912	6.3	14
337	Sost deficiency led to a greater cortical bone formation response to mechanical loading and altered gene expression. <i>Scientific Reports</i> , <b>2017</b> , 7, 9435	4.9	24
336	A comprehensive assessment of the musculoskeletal system: The CAMS-Knee data set. <i>Journal of Biomechanics</i> , <b>2017</b> , 65, 32-39	2.9	43
335	5.18 Endogenous Strategies in Tissue Engineering <b>2017</b> , 329-342		
334	Biophysical induction of cell release for minimally manipulative cell enrichment strategies. <i>PLoS ONE</i> , <b>2017</b> , 12, e0180568	3.7	2
333	Machine learning techniques for the optimization of joint replacements: Application to a short-stem hip implant. <i>PLoS ONE</i> , <b>2017</b> , 12, e0183755	3.7	23
332	In vivo measured joint friction in hip implants during walking after a short rest. <i>PLoS ONE</i> , <b>2017</b> , 12, e0174788	3.7	15
331	Multi-elemental nanoparticle exposure after tantalum component failure in hip arthroplasty: In-depth analysis of a single case. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2017</b> , 13, 2415-2423	6	18
330	Multiscale characterization of the mineral phase at skeletal sites of breast cancer metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 10542-10547	11.5	41
329	Scaffold curvature-mediated novel biomineralization process originates a continuous soft tissue-to-bone interface. <i>Acta Biomaterialia</i> , <b>2017</b> , 60, 64-80	10.8	35
328	In-situ tissue regeneration through SDF-1 $\alpha$ -driven cell recruitment and stiffness-mediated bone regeneration in a critical-sized segmental femoral defect. <i>Acta Biomaterialia</i> , <b>2017</b> , 60, 50-63	10.8	47
327	Femoral head necrosis: A finite element analysis of common and novel surgical techniques. <i>Clinical Biomechanics</i> , <b>2017</b> , 48, 49-56	2.2	9
326	In vivo hip joint loads and pedal forces during ergometer cycling. <i>Journal of Biomechanics</i> , <b>2017</b> , 60, 197-202	2.9	14
325	Strategies for Derisking Translational Processes for Biomedical Technologies. <i>Trends in Biotechnology</i> , <b>2017</b> , 35, 100-108	15.1	23

324	Longitudinal intravital imaging of the femoral bone marrow reveals plasticity within marrow vasculature. <i>Nature Communications</i> , <b>2017</b> , 8, 2153	17.4	41
323	Multiscale Modeling of Bone Healing: Toward a Systems Biology Approach. <i>Frontiers in Physiology</i> , <b>2017</b> , 8, 287	4.6	17
322	A Pronounced Inflammatory Activity Characterizes the Early Fracture Healing Phase in Immunologically Restricted Patients. <i>International Journal of Molecular Sciences</i> , <b>2017</b> , 18,	6.3	29
321	T Lymphocytes Influence the Mineralization Process of Bone. <i>Frontiers in Immunology</i> , <b>2017</b> , 8, 562	8.4	39
320	Combining Coherent Hard X-Ray Tomographies with Phase Retrieval to Generate Three-Dimensional Models of Forming Bone. <i>Frontiers in Materials</i> , <b>2017</b> , 4,	4	5
319	Does aquatic exercise reduce hip and knee joint loading? In vivo load measurements with instrumented implants. <i>PLoS ONE</i> , <b>2017</b> , 12, e0171972	3.7	33
318	Immunological characterization of the early human fracture hematoma. <i>Immunologic Research</i> , <b>2016</b> , 64, 1195-1206	4.3	45
317	Future Treatment Strategies for Delayed Bone Healing: An Osteoimmunologic Approach. <i>Journal of the American Academy of Orthopaedic Surgeons, The</i> , <b>2016</b> , 24, e134-5	4.5	6
316	Articular Cartilage Regeneration <b>2016</b> , 305-347		1
315	Establishment of a preclinical ovine screening model for the investigation of bone tissue engineering strategies in cancellous and cortical bone defects. <i>BMC Musculoskeletal Disorders</i> , <b>2016</b> , 17, 111	2.8	16
314	Biologic-free mechanically induced muscle regeneration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 1534-9	11.5	110
313	BMPs in bone regeneration: Less is more effective, a paradigm-shift. <i>Cytokine and Growth Factor Reviews</i> , <b>2016</b> , 27, 141-8	17.9	65
312	Hydrogels with tunable stress relaxation regulate stem cell fate and activity. <i>Nature Materials</i> , <b>2016</b> , 15, 326-34	27	1153
311	The sagittal stem alignment and the stem version clearly influence the impingement-free range of motion in total hip arthroplasty: a computer model-based analysis. <i>International Orthopaedics</i> , <b>2016</b> , 40, 473-80	3.8	8
310	A double-layer patch design for local and controlled drug delivery as an intraoperative custom-made implant-coating technology. <i>Journal of Applied Biomaterials and Functional Materials</i> , <b>2016</b> , 14, e143-53	1.8	
309	The Role of Immune Reactivity in Bone Regeneration <b>2016</b> ,		3
308	Standardized Loads Acting in Hip Implants. <i>PLoS ONE</i> , <b>2016</b> , 11, e0155612	3.7	149
307	The Restoration of Passive Rotational Tibio-Femoral Laxity after Anterior Cruciate Ligament Reconstruction. <i>PLoS ONE</i> , <b>2016</b> , 11, e0159600	3.7	13

306	The Periosteal Bone Surface is Less Mechano-Responsive than the Endocortical. <i>Scientific Reports</i> , <b>2016</b> , 6, 23480	4.9	56
305	Biomechanical competence of six different bone screws for reconstructive surgery in three different transplants: Fibular, iliac crest, scapular and artificial bone. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , <b>2016</b> , 44, 689-96	3.6	3
304	Influence of particulate and dissociated metal-on-metal hip endoprosthesis wear on mesenchymal stromal cells in vivo and in vitro. <i>Biomaterials</i> , <b>2016</b> , 98, 31-40	15.6	39
303	Synthetic niche to modulate regenerative potential of MSCs and enhance skeletal muscle regeneration. <i>Biomaterials</i> , <b>2016</b> , 99, 95-108	15.6	68
302	Treatment with recombinant human bone morphogenetic protein 7 leads to a transient induction of neutralizing autoantibodies in a subset of patients. <i>BBA Clinical</i> , <b>2016</b> , 6, 100-7		5
301	Qualifying stem cell sources: how to overcome potential pitfalls in regenerative medicine?. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2016</b> , 10, 3-10	4.4	17
300	BMP delivery complements the guiding effect of scaffold architecture without altering bone microstructure in critical-sized long bone defects: A multiscale analysis. <i>Acta Biomaterialia</i> , <b>2015</b> , 23, 282-294	10.8	38
299	Skeletal maturation substantially affects elastic tissue properties in the endosteal and periosteal regions of loaded mice tibiae. <i>Acta Biomaterialia</i> , <b>2015</b> , 21, 154-64	10.8	8
298	High resolution 3D laboratory x-ray tomography data of femora from young, 1-14 day old C57BL/6 mice. <i>Data in Brief</i> , <b>2015</b> , 4, 32-3	1.2	3
297	A4.7 T and B cells participate in bone repair by infiltrating the fracture callus in a two-wave fashion. <i>Annals of the Rheumatic Diseases</i> , <b>2015</b> , 74, A39.1-A39	2.4	
296	Temporal profile of inflammatory response to fracture and hemorrhagic shock: Proposal of a novel long-term survival murine multiple trauma model. <i>Journal of Orthopaedic Research</i> , <b>2015</b> , 33, 965-70	3.8	8
295	The connection between cellular mechanoregulation and tissue patterns during bone healing. <i>Medical and Biological Engineering and Computing</i> , <b>2015</b> , 53, 829-42	3.1	14
294	Immune modulation as a therapeutic strategy in bone regeneration. <i>Journal of Experimental Orthopaedics</i> , <b>2015</b> , 2, 1	2.3	64
293	Boon and Bane of Inflammation in Bone Tissue Regeneration and Its Link with Angiogenesis. <i>Tissue Engineering - Part B: Reviews</i> , <b>2015</b> , 21, 354-64	7.9	84
292	Long bone maturation is driven by pore closing: A quantitative tomography investigation of structural formation in young C57BL/6 mice. <i>Acta Biomaterialia</i> , <b>2015</b> , 22, 92-102	10.8	15
291	Biomaterials based strategies for skeletal muscle tissue engineering: existing technologies and future trends. <i>Biomaterials</i> , <b>2015</b> , 53, 502-21	15.6	270
290	Key elements for nourishing the translational research environment. <i>Science Translational Medicine</i> , <b>2015</b> , 7, 282cm2	17.5	21
289	Monitoring in vivo (re)modeling: a computational approach using 4D microCT data to quantify bone surface movements. <i>Bone</i> , <b>2015</b> , 75, 210-21	4.7	49

288	Muscle shape consistency and muscle volume prediction of thigh muscles. <i>Scandinavian Journal of Medicine and Science in Sports</i> , <b>2015</b> , 25, e208-13	4.6	26
287	Accumulation of amino-polyvinyl alcohol-coated superparamagnetic iron oxide nanoparticles in bone marrow: implications for local stromal cells. <i>Nanomedicine</i> , <b>2015</b> , 10, 2139-51	5.6	4
286	Matrix elasticity of void-forming hydrogels controls transplanted-stem-cell-mediated bone formation. <i>Nature Materials</i> , <b>2015</b> , 14, 1269-77	27	302
285	Selecting boundary conditions in physiological strain analysis of the femur: Balanced loads, inertia relief method and follower load. <i>Medical Engineering and Physics</i> , <b>2015</b> , 37, 1180-5	2.4	7
284	Interfragmentary lag screw fixation in locking plate constructs increases stiffness in simple fracture patterns. <i>Clinical Biomechanics</i> , <b>2015</b> , 30, 814-9	2.2	14
283	The emergence of extracellular matrix mechanics and cell traction forces as important regulators of cellular self-organization. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2015</b> , 14, 1-13	3.8	34
282	Hydrogels: One Step Creation of Multifunctional 3D Architected Hydrogels Inducing Bone Regeneration (Adv. Mater. 10/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 1800-1800	24	1
281	Do post-operative changes of neck-shaft angle and femoral component anteversion have an effect on clinical outcome following uncemented total hip arthroplasty?. <i>Bone and Joint Journal</i> , <b>2015</b> , 97-B, 1615-22	5.6	16
280	Semi-rigid screws provide an auxiliary option to plate working length to control interfragmentary movement in locking plate fixation at the distal femur. <i>Injury</i> , <b>2015</b> , 46 Suppl 4, S24-32	2.5	18
279	Aging Leads to a Dysregulation in Mechanically Driven Bone Formation and Resorption. <i>Journal of Bone and Mineral Research</i> , <b>2015</b> , 30, 1864-73	6.3	90
278	Increased unilateral tendon stiffness and its effect on gait 2-6 years after Achilles tendon rupture. <i>Scandinavian Journal of Medicine and Science in Sports</i> , <b>2015</b> , 25, 860-7	4.6	38
277	The collagen I mimetic peptide DGEA enhances an osteogenic phenotype in mesenchymal stem cells when presented from cell-encapsulating hydrogels. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2015</b> , 103, 3516-25	5.4	30
276	Registering 2D and 3D imaging data of bone during healing. <i>Connective Tissue Research</i> , <b>2015</b> , 56, 133-43	3.3	7
275	Compressive Residual Strains in Mineral Nanoparticles as a Possible Origin of Enhanced Crack Resistance in Human Tooth Dentin. <i>Nano Letters</i> , <b>2015</b> , 15, 3729-34	11.5	43
274	Generation of an iPS cell line from bone marrow derived mesenchymal stromal cells from an elderly patient. <i>Stem Cell Research</i> , <b>2015</b> , 15, 565-8	1.6	5
273	Computational analyses of different intervertebral cages for lumbar spinal fusion. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 3274-82	2.9	21
272	Improved bone defect healing by a superagonistic GDF5 variant derived from a patient with multiple synostoses syndrome. <i>Bone</i> , <b>2015</b> , 73, 111-9	4.7	10
271	Effect of in vivo loading on bone composition varies with animal age. <i>Experimental Gerontology</i> , <b>2015</b> , 63, 48-58	4.5	18

270	Working length of locking plates determines interfragmentary movement in distal femur fractures under physiological loading. <i>Clinical Biomechanics</i> , <b>2015</b> , 30, 391-6	2.2	53
269	One step creation of multifunctional 3D architected hydrogels inducing bone regeneration. <i>Advanced Materials</i> , <b>2015</b> , 27, 1738-44	24	88
268	Skeletal maturity leads to a reduction in the strain magnitudes induced within the bone: a murine tibia study. <i>Acta Biomaterialia</i> , <b>2015</b> , 13, 301-10	10.8	61
267	In Vivo Bioluminescence Imaging - A Suitable Method to Track Mesenchymal Stromal Cells in a Skeletal Muscle Trauma. <i>The Open Orthopaedics Journal</i> , <b>2015</b> , 9, 262-9	0.3	10
266	Investigation of different cage designs and mechano-regulation algorithms in the lumbar interbody fusion process - a finite element analysis. <i>Journal of Biomechanics</i> , <b>2014</b> , 47, 1514-9	2.9	14
265	T and B cells participate in bone repair by infiltrating the fracture callus in a two-wave fashion. <i>Bone</i> , <b>2014</b> , 64, 155-65	4.7	113
264	Presentation of BMP-2 mimicking peptides in 3D hydrogels directs cell fate commitment in osteoblasts and mesenchymal stem cells. <i>Biomacromolecules</i> , <b>2014</b> , 15, 445-55	6.9	74
263	Evidence of imbalanced adaptation between muscle and tendon in adolescent athletes. <i>Scandinavian Journal of Medicine and Science in Sports</i> , <b>2014</b> , 24, e283-9	4.6	31
262	Measurement of the number of lumbar spinal movements in the sagittal plane in a 24-hour period. <i>European Spine Journal</i> , <b>2014</b> , 23, 2375-84	2.7	28
261	Longitudinal analysis of MR spin-spin relaxation times (T2) in medial femorotibial cartilage of adolescent vs mature athletes: dependence of deep and superficial zone properties on sex and age. <i>Osteoarthritis and Cartilage</i> , <b>2014</b> , 22, 1554-8	6.2	15
260	The influence of age on adaptive bone formation and bone resorption. <i>Biomaterials</i> , <b>2014</b> , 35, 9290-301	15.6	79
259	Automatic initial contact detection during overground walking for clinical use. <i>Gait and Posture</i> , <b>2014</b> , 40, 730-4	2.6	10
258	Mechanical and structural properties of bone in non-critical and critical healing in rat. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 4009-19	10.8	31
257	Amino-polyvinyl alcohol coated superparamagnetic iron oxide nanoparticles are suitable for monitoring of human mesenchymal stromal cells in vivo. <i>Small</i> , <b>2014</b> , 10, 4340-51	11	21
256	Bone regeneration via novel macroporous CPC scaffolds in critical-sized cranial defects in rats. <i>Dental Materials</i> , <b>2014</b> , 30, e199-207	5.7	40
255	Automatic distinction of upper body motions in the main anatomical planes. <i>Medical Engineering and Physics</i> , <b>2014</b> , 36, 516-21	2.4	7
254	Mineralizing surface is the main target of mechanical stimulation independent of age: 3D dynamic in vivo morphometry. <i>Bone</i> , <b>2014</b> , 66, 15-25	4.7	77
253	Initiation and early control of tissue regeneration - bone healing as a model system for tissue regeneration. <i>Expert Opinion on Biological Therapy</i> , <b>2014</b> , 14, 247-59	5.4	50

252	Influence of basal support and early loading on bone cartilage healing in press-fitted osteochondral autografts. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2014</b> , 22, 1445-51	5.5	10
251	Age-related loss of lumbar spinal lordosis and mobility--a study of 323 asymptomatic volunteers. <i>PLoS ONE</i> , <b>2014</b> , 9, e116186	3.7	42
250	European musculoskeletal health and mobility in Horizon 2020: Setting priorities for musculoskeletal research and innovation. <i>Bone and Joint Research</i> , <b>2014</b> , 3, 48-50	4.2	10
249	Cyclic mechanical loading enables solute transport and oxygen supply in bone healing: an in vitro investigation. <i>Tissue Engineering - Part A</i> , <b>2014</b> , 20, 486-93	3.9	10
248	Changing the mindset in life sciences toward translation: a consensus. <i>Science Translational Medicine</i> , <b>2014</b> , 6, 264cm12	17.5	31
247	Notch pathway inhibition controls myeloma bone disease in the murine MOPC315.BM model. <i>Blood Cancer Journal</i> , <b>2014</b> , 4, e217	7	35
246	Relationship between nanoscale mineral properties and calcein labeling in mineralizing bone surfaces. <i>Connective Tissue Research</i> , <b>2014</b> , 55 Suppl 1, 15-7	3.3	10
245	MALDI imaging mass spectrometry: discrimination of pathophysiological regions in traumatized skeletal muscle by characteristic peptide signatures. <i>Proteomics</i> , <b>2014</b> , 14, 2249-60	4.8	37
244	Initial immune reaction and angiogenesis in bone healing. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2014</b> , 8, 120-30	4.4	80
243	Longitudinal change in femorotibial cartilage thickness and subchondral bone plate area in male and female adolescent vs. mature athletes. <i>Annals of Anatomy</i> , <b>2014</b> , 196, 150-7	2.9	14
242	Multiscale, converging defects of macro-porosity, microstructure and matrix mineralization impact long bone fragility in NF1. <i>PLoS ONE</i> , <b>2014</b> , 9, e86115	3.7	21
241	Interaction of age and mechanical stability on bone defect healing: an early transcriptional analysis of fracture hematoma in rat. <i>PLoS ONE</i> , <b>2014</b> , 9, e106462	3.7	19
240	Local drug delivery by personalized, intraoperative custom-made implant coating. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2013</b> , 101, 950-63	3.5	
239	Polycaprolactone scaffold and reduced rhBMP-7 dose for the regeneration of critical-sized defects in sheep tibiae. <i>Biomaterials</i> , <b>2013</b> , 34, 9960-8	15.6	92
238	Terminally differentiated CD8+ T cells negatively affect bone regeneration in humans. <i>Science Translational Medicine</i> , <b>2013</b> , 5, 177ra36	17.5	177
237	Computational biomechanics of a lumbar motion segment in pure and combined shear loads. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 2513-21	2.9	22
236	Diminished response to in vivo mechanical loading in trabecular and not cortical bone in adulthood of female C57Bl/6 mice coincides with a reduction in deformation to load. <i>Bone</i> , <b>2013</b> , 55, 335-46	4.7	105
235	Considerations when loading spinal finite element models with predicted muscle forces from inverse static analyses. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 1376-8	2.9	16

234	Preoperative irradiation for the prevention of heterotopic ossification induces local inflammation in humans. <i>Bone</i> , <b>2013</b> , 55, 93-101	4.7	17
233	ACL Deficient Patients With Passive Knee Joint Instability Overcompensate During Active Movements. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , <b>2013</b> , 29, e181-e182	5.4	
232	Architecture of the osteocyte network correlates with bone material quality. <i>Journal of Bone and Mineral Research</i> , <b>2013</b> , 28, 1837-45	6.3	216
231	Human immune cells' behavior and survival under bioenergetically restricted conditions in an in vitro fracture hematoma model. <i>Cellular and Molecular Immunology</i> , <b>2013</b> , 10, 151-8	15.4	34
230	CHAPTER 2:Bone Structural Adaptation and Wolff's Law. <i>RSC Smart Materials</i> , <b>2013</b> , 17-45	0.6	3
229	Anterior cruciate ligament-deficient patients with passive knee joint laxity have a decreased range of anterior-posterior motion during active movements. <i>American Journal of Sports Medicine</i> , <b>2013</b> , 41, 1051-7	6.8	39
228	Mechanical load modulates the stimulatory effect of BMP2 in a rat nonunion model. <i>Tissue Engineering - Part A</i> , <b>2013</b> , 19, 247-54	3.9	53
227	In serum veritas-in serum sanitas? Cell non-autonomous aging compromises differentiation and survival of mesenchymal stromal cells via the oxidative stress pathway. <i>Cell Death and Disease</i> , <b>2013</b> , 4, e970	9.8	34
226	Healing of a mechano-responsive material. <i>Europhysics Letters</i> , <b>2013</b> , 104, 68005	1.6	2
225	Improvement of contraction force in injured skeletal muscle after autologous mesenchymal stroma cell transplantation is accompanied by slow to fast fiber type shift. <i>Transfusion Medicine and Hemotherapy</i> , <b>2013</b> , 40, 425-30	4.2	12
224	OP0105 Accumulation of CD34+ hematopoietic stem cells in the initial inflammatory human fracture hematoma is driven by rantes and eotaxin. <i>Annals of the Rheumatic Diseases</i> , <b>2013</b> , 71, 88.2-88	2.4	
223	Slight changes in the mechanical stimulation affects osteoblast- and osteoclast-like cells in co-culture. <i>Transfusion Medicine and Hemotherapy</i> , <b>2013</b> , 40, 441-7	4.2	9
222	Polarized Raman anisotropic response of collagen in tendon: towards 3D orientation mapping of collagen in tissues. <i>PLoS ONE</i> , <b>2013</b> , 8, e63518	3.7	51
221	CD133: enhancement of bone healing by local transplantation of peripheral blood cells in a biologically delayed rat osteotomy model. <i>PLoS ONE</i> , <b>2013</b> , 8, e52650	3.7	8
220	Geometry-driven cell organization determines tissue growths in scaffold pores: consequences for fibronectin organization. <i>PLoS ONE</i> , <b>2013</b> , 8, e73545	3.7	56
219	CD73/5'-ecto-nucleotidase acts as a regulatory factor in osteo-/chondrogenic differentiation of mechanically stimulated mesenchymal stromal cells. <i>European Cells and Materials</i> , <b>2013</b> , 25, 37-47	4.3	60
218	Microstructure and homogeneity of distribution of mineralised struts determine callus strength. <i>European Cells and Materials</i> , <b>2013</b> , 25, 366-79; discussion 378-9	4.3	6
217	Constraints to Articular Cartilage Regeneration <b>2013</b> , 1065-1099		



216	Patellofemoral joint contact forces during activities with high knee flexion. <i>Journal of Orthopaedic Research</i> , <b>2012</b> , 30, 408-15	3.8	61
215	The spatio-temporal arrangement of different tissues during bone healing as a result of simple mechanobiological rules. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2012</b> , 11, 147-60	3.8	36
214	Intra-operatively customized implant coating strategies for local and controlled drug delivery to bone. <i>Advanced Drug Delivery Reviews</i> , <b>2012</b> , 64, 1142-51	18.5	40
213	Increased BMP expression in arthrofibrosis after TKA. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2012</b> , 20, 1803-8	5.5	15
212	Weightbearing ovine osteochondral defects heal with inadequate subchondral bone plate restoration: implications regarding osteochondral autograft harvesting. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2012</b> , 20, 1923-30	5.5	12
211	The difference between stretching and splitting muscle trauma during THA seems not to play a dominant role in influencing periprosthetic BMD changes. <i>Clinical Biomechanics</i> , <b>2012</b> , 27, 813-8	2.2	10
210	Absolute and functional iron deficiency in professional athletes during training and recovery. <i>International Journal of Cardiology</i> , <b>2012</b> , 156, 186-91	3.2	50
209	BMP2 and mechanical loading cooperatively regulate immediate early signalling events in the BMP pathway. <i>BMC Biology</i> , <b>2012</b> , 10, 37	7.3	77
208	Biomaterial delivery of morphogens to mimic the natural healing cascade in bone. <i>Advanced Drug Delivery Reviews</i> , <b>2012</b> , 64, 1257-76	18.5	184
207	Deterioration of fracture healing in the mouse model of NF1 long bone dysplasia. <i>Bone</i> , <b>2012</b> , 51, 651-60	4.7	21
206	Crosstalk between immune cells and mesenchymal stromal cells in a 3D bioreactor system. <i>International Journal of Artificial Organs</i> , <b>2012</b> , 35, 986-95	1.9	11
205	Comparative evaluation of a novel measurement tool to assess lumbar spine posture and range of motion. <i>European Spine Journal</i> , <b>2012</b> , 21, 2170-80	2.7	51
204	The impact of substrate stiffness and mechanical loading on fibroblast-induced scaffold remodeling. <i>Tissue Engineering - Part A</i> , <b>2012</b> , 18, 1804-17	3.9	48
203	Generic rules of mechano-regulation combined with subject specific loading conditions can explain bone adaptation after THA. <i>PLoS ONE</i> , <b>2012</b> , 7, e36231	3.7	26
202	Velocity of lordosis angle during spinal flexion and extension. <i>PLoS ONE</i> , <b>2012</b> , 7, e50135	3.7	21
201	Immediate and delayed transplantation of mesenchymal stem cells improve muscle force after skeletal muscle injury in rats. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2012</b> , 6 Suppl 3, s60-7	4.4	26
200	Shaping scaffold structures in rapid manufacturing implants: a modeling approach toward mechano-biologically optimized configurations for large bone defect. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2012</b> , 100, 1736-45	3.5	19
199	Porous scaffold architecture guides tissue formation. <i>Journal of Bone and Mineral Research</i> , <b>2012</b> , 27, 1275-88	6.3	80

198	Ultrasound-based computer navigation of the acetabular component: a feasibility study. <i>Archives of Orthopaedic and Trauma Surgery</i> , <b>2012</b> , 132, 517-25	3.6	9
197	The direct lateral approach: impact on gait patterns, foot progression angle and pain in comparison with a minimally invasive anterolateral approach. <i>Archives of Orthopaedic and Trauma Surgery</i> , <b>2012</b> , 132, 725-31	3.6	21
196	Inflammatory phase of bone healing initiates the regenerative healing cascade. <i>Cell and Tissue Research</i> , <b>2012</b> , 347, 567-73	4.2	163
195	Mesenchymal stem cell therapy following muscle trauma leads to improved muscular regeneration in both male and female rats. <i>Gender Medicine</i> , <b>2012</b> , 9, 129-36		21
194	A tissue engineering solution for segmental defect regeneration in load-bearing long bones. <i>Science Translational Medicine</i> , <b>2012</b> , 4, 141ra93	17.5	241
193	Lymphocytes control bone fracture healing by programming the mineralisation capacity of migratory osteogenic precursors. <i>Annals of the Rheumatic Diseases</i> , <b>2012</b> , 71, A63.1-A63	2.4	2
192	High-tech hip implant for wireless temperature measurements in vivo. <i>PLoS ONE</i> , <b>2012</b> , 7, e43489	3.7	34
191	Hypoxia promotes osteogenesis but suppresses adipogenesis of human mesenchymal stromal cells in a hypoxia-inducible factor-1 dependent manner. <i>PLoS ONE</i> , <b>2012</b> , 7, e46483	3.7	138
190	Functional comparison of chronological and in vitro aging: differential role of the cytoskeleton and mitochondria in mesenchymal stromal cells. <i>PLoS ONE</i> , <b>2012</b> , 7, e52700	3.7	116
189	Intra-Arterial MSC Transplantation Restores Functional Capacity After Skeletal Muscle Trauma. <i>The Open Orthopaedics Journal</i> , <b>2012</b> , 6, 352-6	0.3	18
188	An experimental setup to evaluate innovative therapy options for the enhancement of bone healing using BMP as a benchmark--a pilot study. <i>European Cells and Materials</i> , <b>2012</b> , 23, 262-71; discussion 271-2	4.3	11
187	In vivo tracking of segmental bone defect healing reveals that callus patterning is related to early mechanical stimuli. <i>European Cells and Materials</i> , <b>2012</b> , 24, 358-71; discussion 371	4.3	25
186	Time course of skeletal muscle regeneration after severe trauma. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , <b>2011</b> , 82, 102-11	4.3	34
185	The organization of the osteocyte network mirrors the extracellular matrix orientation in bone. <i>Journal of Structural Biology</i> , <b>2011</b> , 173, 303-11	3.4	161
184	The pin-bone interface in external fixator: a standardized analysis in a sheep osteotomy model. <i>Journal of Orthopaedic Trauma</i> , <b>2011</b> , 25, 438-45	3.1	2
183	Collateral ligament length change patterns after joint line elevation may not explain midflexion instability following TKA. <i>Medical Engineering and Physics</i> , <b>2011</b> , 33, 1303-8	2.4	23
182	A 5-mm femoral defect in female but not in male rats leads to a reproducible atrophic non-union. <i>Archives of Orthopaedic and Trauma Surgery</i> , <b>2011</b> , 131, 121-9	3.6	38
181	The effect of design parameters of dynamic pedicle screw systems on kinematics and load bearing: an in vitro study. <i>European Spine Journal</i> , <b>2011</b> , 20, 297-307	2.7	62

180	Quantification and significance of fluid shear stress field in biaxial cell stretching device. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2011</b> , 10, 559-64	3.8	11
179	Combined in vivo/in silico study of mechanobiological mechanisms during endochondral ossification in bone healing. <i>Annals of Biomedical Engineering</i> , <b>2011</b> , 39, 2531-41	4.7	10
178	Custom-made composite scaffolds for segmental defect repair in long bones. <i>International Orthopaedics</i> , <b>2011</b> , 35, 1229-36	3.8	98
177	Human early fracture hematoma is characterized by inflammation and hypoxia. <i>Clinical Orthopaedics and Related Research</i> , <b>2011</b> , 469, 3118-26	2.2	122
176	Influence of gender and fixation stability on bone defect healing in middle-aged rats: a pilot study. <i>Clinical Orthopaedics and Related Research</i> , <b>2011</b> , 469, 3102-10	2.2	13
175	Immunologically restricted patients exhibit a pronounced inflammation and inadequate response to hypoxia in fracture hematomas. <i>Immunologic Research</i> , <b>2011</b> , 51, 116-22	4.3	27
174	Influence of prosthesis design and implantation technique on implant stresses after cementless revision THR. <i>Journal of Orthopaedic Surgery and Research</i> , <b>2011</b> , 6, 20	2.8	11
173	Composite transcriptome assembly of RNA-seq data in a sheep model for delayed bone healing. <i>BMC Genomics</i> , <b>2011</b> , 12, 158	4.5	53
172	The medial-lateral force distribution in the ovine stifle joint during walking. <i>Journal of Orthopaedic Research</i> , <b>2011</b> , 29, 567-71	3.8	22
171	The weighted optimal common shape technique improves identification of the hip joint center of rotation in vivo. <i>Journal of Orthopaedic Research</i> , <b>2011</b> , 29, 1470-5	3.8	40
170	Fracture healing is accelerated in the absence of the adaptive immune system. <i>Journal of Bone and Mineral Research</i> , <b>2011</b> , 26, 113-24	6.3	152
169	The mechanical heterogeneity of the hard callus influences local tissue strains during bone healing: a finite element study based on sheep experiments. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 517-23	2.9	24
168	The SCoRE residual: a quality index to assess the accuracy of joint estimations. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 1400-4	2.9	44
167	Inter-species investigation of the mechano-regulation of bone healing: comparison of secondary bone healing in sheep and rat. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 1237-45	2.9	52
166	Spatial-temporal mapping of bone structural and elastic properties in a sheep model following osteotomy. <i>Ultrasound in Medicine and Biology</i> , <b>2011</b> , 37, 474-83	3.5	41
165	Poorly ordered bone as an endogenous scaffold for the deposition of highly oriented lamellar tissue in rapidly growing ovine bone. <i>Cells Tissues Organs</i> , <b>2011</b> , 194, 119-23	2.1	25
164	The challenges of modern interdisciplinary medical research. <i>Nature Biotechnology</i> , <b>2011</b> , 29, 1145-8	44.5	6
163	Osteogenic predifferentiation of human bone marrow-derived stem cells by short-term mechanical stimulation. <i>The Open Orthopaedics Journal</i> , <b>2011</b> , 5, 1-6	0.3	27

162	Time kinetics of bone defect healing in response to BMP-2 and GDF-5 characterised by in vivo biomechanics. <i>European Cells and Materials</i> , <b>2011</b> , 21, 177-92	4.3	31
161	CD73 and CD29 concurrently mediate the mechanically induced decrease of migratory capacity of mesenchymal stromal cells. <i>European Cells and Materials</i> , <b>2011</b> , 22, 26-42	4.3	68
160	Biomechanik des Kniegelenks <b>2011</b> , 19-31		2
159	Constraints to Articular Cartilage Regeneration <b>2011</b> , 883-919		1
158	Zfp521 controls bone mass by HDAC3-dependent attenuation of Runx2 activity. <i>Journal of Experimental Medicine</i> , <b>2011</b> , 208, i1-i1	16.6	
157	Zfp521 controls bone mass by HDAC3-dependent attenuation of Runx2 activity. <i>Journal of Cell Biology</i> , <b>2010</b> , 191, 1271-83	7.3	87
156	In vitro models for bone mechanobiology: applications in bone regeneration and tissue engineering. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , <b>2010</b> , 224, 1533-41	1.7	12
155	Insight into the molecular pathophysiology of delayed bone healing in a sheep model. <i>Tissue Engineering - Part A</i> , <b>2010</b> , 16, 191-9	3.9	41
154	Realistic loads for testing hip implants. <i>Bio-Medical Materials and Engineering</i> , <b>2010</b> , 20, 65-75	1	102
153	The early fracture hematoma and its potential role in fracture healing. <i>Tissue Engineering - Part B: Reviews</i> , <b>2010</b> , 16, 427-34	7.9	238
152	Designing biomimetic scaffolds for bone regeneration: why aim for a copy of mature tissue properties if nature uses a different approach?. <i>Soft Matter</i> , <b>2010</b> , 6, 4976	3.6	72
151	Frontal plane alignment: an imageless method to predict the mechanical femoral-tibial angle (mFTA) based on functional determination of joint centres and axes. <i>Gait and Posture</i> , <b>2010</b> , 31, 204-8	2.6	12
150	Repeatability and reproducibility of OSSCA, a functional approach for assessing the kinematics of the lower limb. <i>Gait and Posture</i> , <b>2010</b> , 32, 231-6	2.6	57
149	Mechanical stimulation of the pro-angiogenic capacity of human fracture haematoma: involvement of VEGF mechano-regulation. <i>Bone</i> , <b>2010</b> , 47, 438-44	4.7	33
148	Influences of age and mechanical stability on volume, microstructure, and mineralization of the fracture callus during bone healing: is osteoclast activity the key to age-related impaired healing?. <i>Bone</i> , <b>2010</b> , 47, 219-28	4.7	54
147	The expression of proinflammatory cytokines and matrix metalloproteinases in the synovial membranes of patients with osteoarthritis compared with traumatic knee disorders. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , <b>2010</b> , 26, 1096-104	5.4	45
146	Modulation of matrix metalloprotease-2 levels by mechanical loading of three-dimensional mesenchymal stem cell constructs: impact on in vitro tube formation. <i>Tissue Engineering - Part A</i> , <b>2010</b> , 16, 3139-48	3.9	23
145	Mechanobiology of bone healing and regeneration: in vivo models. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , <b>2010</b> , 224, 1543-53	1.7	46

144	Reorganization of the femoral cortex due to age-, sex-, and endoprosthesis-related effects emphasized by osteonal dimensions and remodeling. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2010</b> , 92, 1440-51	5.4	17
143	Joint line elevation in revision TKA leads to increased patellofemoral contact forces. <i>Journal of Orthopaedic Research</i> , <b>2010</b> , 28, 1-5	3.8	62
142	Mineral crystal alignment in mineralized fracture callus determined by 3D small-angle X-ray scattering. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 247, 012031	0.3	6
141	Effect of fatigue on force fluctuations in knee extensors in young adults. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2010</b> , 368, 2783-98	3	19
140	Establishment of a preclinical ovine model for tibial segmental bone defect repair by applying bone tissue engineering strategies. <i>Tissue Engineering - Part B: Reviews</i> , <b>2010</b> , 16, 93-104	7.9	59
139	Founding of the julius wolff institut charit� universit�smedizin berlin: editorial comment. <i>Clinical Orthopaedics and Related Research</i> , <b>2010</b> , 468, 1050-1	2.2	2
138	Toward biomimetic materials in bone regeneration: functional behavior of mesenchymal stem cells on a broad spectrum of extracellular matrix components. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2010</b> , 95, 1114-24	5.4	54
137	Size and habit of mineral particles in bone and mineralized callus during bone healing in sheep. <i>Journal of Bone and Mineral Research</i> , <b>2010</b> , 25, 2029-38	6.3	56
136	Temporal tissue patterns in bone healing of sheep. <i>Journal of Orthopaedic Research</i> , <b>2010</b> , 28, 1440-7	3.8	30
135	Regulation of the patellofemoral contact area: an essential mechanism in patellofemoral joint mechanics?. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 3237-9	2.9	10
134	Validation of beta-actin used as endogenous control for gene expression analysis in mechanobiology studies: amendments. <i>Stem Cells</i> , <b>2010</b> , 28, 633-4	5.8	4
133	Ovine bone- and marrow-derived progenitor cells and their potential for scaffold-based bone tissue engineering applications in vitro and in vivo. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2010</b> , 4, 565-76	4.4	34
132	Standard bone healing stages occur during delayed bone healing, albeit with a different temporal onset and spatial distribution of callus tissues. <i>Histology and Histopathology</i> , <b>2010</b> , 25, 1149-62	1.4	16
131	The influence of recovery and training phases on body composition, peripheral vascular function and immune system of professional soccer players. <i>PLoS ONE</i> , <b>2009</b> , 4, e4910	3.7	29
130	Effect of mechanical stimulation on osteoblast- and osteoclast-like cells in vitro. <i>Cells Tissues Organs</i> , <b>2009</b> , 190, 61-8	2.1	43
129	Osteochondral defect repair after implantation of biodegradable scaffolds: indirect magnetic resonance arthrography and histopathologic correlation. <i>Acta Radiologica</i> , <b>2009</b> , 50, 765-74	2	13
128	FGF23 is a putative marker for bone healing and regeneration. <i>Journal of Orthopaedic Research</i> , <b>2009</b> , 27, 1141-6	3.8	38
127	Differential regulation of blood vessel formation between standard and delayed bone healing. <i>Journal of Orthopaedic Research</i> , <b>2009</b> , 27, 1133-40	3.8	92

126	Cellular composition of the initial fracture hematoma compared to a muscle hematoma: a study in sheep. <i>Journal of Orthopaedic Research</i> , <b>2009</b> , 27, 1147-51	3.8	60
125	A comparison of techniques for fixation of the quadriceps muscle-tendon complex for in vitro biomechanical testing of the knee joint in sheep. <i>Medical Engineering and Physics</i> , <b>2009</b> , 31, 69-75	2.4	7
124	Stair climbing results in more challenging patellofemoral contact mechanics and kinematics than walking at early knee flexion under physiological-like quadriceps loading. <i>Journal of Biomechanics</i> , <b>2009</b> , 42, 2590-6	2.9	32
123	Insights into mesenchymal stem cell aging: involvement of antioxidant defense and actin cytoskeleton. <i>Stem Cells</i> , <b>2009</b> , 27, 1288-97	5.8	179
122	The challenge of establishing preclinical models for segmental bone defect research. <i>Biomaterials</i> , <b>2009</b> , 30, 2149-63	15.6	284
121	Biaxial cell stimulation: A mechanical validation. <i>Journal of Biomechanics</i> , <b>2009</b> , 42, 1692-6	2.9	33
120	Promiscuous and depolarization-induced immediate-early response genes are induced by mechanical strain of osteoblasts. <i>Journal of Bone and Mineral Research</i> , <b>2009</b> , 24, 1247-62	6.3	24
119	Indirect MR-arthrography in osteochondral autograft and crushed bone graft with a collagen membrane--correlation with histology. <i>European Journal of Radiology</i> , <b>2009</b> , 70, 155-64	4.7	1
118	Influence of gender and mechanical stability on bone defect healing: Males show a stronger biological response than females. <i>Bone</i> , <b>2009</b> , 44, S264	4.7	2
117	The evolution of size and distribution of apatite mineral crystals during bone fracture healing in sheep. <i>Bone</i> , <b>2009</b> , 44, S271-S272	4.7	2
116	Spatial and temporal variations of mechanical properties and mineral content of the external callus during bone healing. <i>Bone</i> , <b>2009</b> , 45, 185-92	4.7	96
115	Increased calcium content and inhomogeneity of mineralization render bone toughness in osteoporosis: mineralization, morphology and biomechanics of human single trabeculae. <i>Bone</i> , <b>2009</b> , 45, 1034-43	4.7	128
114	Sex-specific compromised bone healing in female rats might be associated with a decrease in mesenchymal stem cell quantity. <i>Bone</i> , <b>2009</b> , 45, 1065-72	4.7	42
113	Reproducibility of a functional approach to gait analysis. <i>Gait and Posture</i> , <b>2009</b> , 30, S34-S35	2.6	
112	Cyclic strain disrupts endothelial network formation on Matrigel. <i>Microvascular Research</i> , <b>2009</b> , 78, 358-63	3.7	15
111	Locally applied osteogenic predifferentiated progenitor cells are more effective than undifferentiated mesenchymal stem cells in the treatment of delayed bone healing. <i>Tissue Engineering - Part A</i> , <b>2009</b> , 15, 2947-54	3.9	39
110	Dose-response relationship of mesenchymal stem cell transplantation and functional regeneration after severe skeletal muscle injury in rats. <i>Tissue Engineering - Part A</i> , <b>2009</b> , 15, 487-92	3.9	58
109	Characterization of a rat osteotomy model with impaired healing. <i>BMC Musculoskeletal Disorders</i> , <b>2008</b> , 9, 135	2.8	28

108	In vivo visualization of locally transplanted mesenchymal stem cells in the severely injured muscle in rats. <i>Tissue Engineering - Part A</i> , <b>2008</b> , 14, 1149-60	3.9	37
107	Influence of age and mechanical stability on bone defect healing: age reverses mechanical effects. <i>Bone</i> , <b>2008</b> , 42, 758-64	4.7	58
106	Pressure, oxygen tension and temperature in the periosteal callus during bone healing--an in vivo study in sheep. <i>Bone</i> , <b>2008</b> , 43, 734-9	4.7	49
105	Does in vitro low-intensity pulsed ultrasound stimulate endochondral ossification?. <i>Biomedizinische Technik</i> , <b>2008</b> , 53, 300-5	1.3	1
104	Influence of scaffold stiffness on subchondral bone and subsequent cartilage regeneration in an ovine model of osteochondral defect healing. <i>American Journal of Sports Medicine</i> , <b>2008</b> , 36, 2379-91	6.8	67
103	Biomechanical, microvascular, and cellular factors promote muscle and bone regeneration. <i>Exercise and Sport Sciences Reviews</i> , <b>2008</b> , 36, 64-70	6.7	21
102	A new device to control mechanical environment in bone defect healing in rats. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 2696-702	2.9	25
101	A new animal model for bone atrophic nonunion: fixation by external fixator. <i>Journal of Orthopaedic Research</i> , <b>2008</b> , 26, 1649-55	3.8	29
100	Mechanical induction of critically delayed bone healing in sheep: radiological and biomechanical results. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 3066-72	2.9	51
99	In Vivo Visualization of Locally Transplanted Mesenchymal Stem Cells in the Severely Injured Muscle in Rats. <i>Tissue Engineering - Part A</i> , <b>2008</b> , 080423075413219	3.9	2
98	Digital image correlation: a technique for determining local mechanical conditions within early bone callus. <i>Medical Engineering and Physics</i> , <b>2007</b> , 29, 820-3	2.4	58
97	A survey of formal methods for determining functional joint axes. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 2150-7	2.9	158
96	Physiologically based boundary conditions in finite element modelling. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 2318-23	2.9	142
95	Crushed bone grafts and a collagen membrane are not suitable for enhancing cartilage quality in the regeneration of osteochondral defects--an in vivo study in sheep. <i>Journal of Biomechanics</i> , <b>2007</b> , 40 Suppl 1, S64-72	2.9	6
94	A new model to predict in vivo human knee kinematics under physiological-like muscle activation. <i>Journal of Biomechanics</i> , <b>2007</b> , 40 Suppl 1, S45-53	2.9	15
93	Stromelysin-3 over-expression enhances tumorigenesis in MCF-7 and MDA-MB-231 breast cancer cell lines: involvement of the IGF-1 signalling pathway. <i>BMC Cancer</i> , <b>2007</b> , 7, 12	4.8	33
92	Mesenchymal stem cells regulate angiogenesis according to their mechanical environment. <i>Stem Cells</i> , <b>2007</b> , 25, 903-10	5.8	162
91	Matrix metalloprotease activity is an essential link between mechanical stimulus and mesenchymal stem cell behavior. <i>Stem Cells</i> , <b>2007</b> , 25, 1985-94	5.8	89

90	Cartilage viability after trochleoplasty. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , <b>2007</b> , 15, 161-7	5.5	62
89	Mechanical evaluation of a new minimally invasive device for stabilization of proximal humeral fractures in elderly patients: a cadaver study. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , <b>2007</b> , 78, 430-5	4.3	13
88	Mechanical behavior of articular cartilage after osteochondral autograft transfer in an ovine model. <i>American Journal of Sports Medicine</i> , <b>2007</b> , 35, 555-63	6.8	39
87	Timely fracture-healing requires optimization of axial fixation stability. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2007</b> , 89, 1575-85	5.6	80
86	Biomechanical in vitro testing of human osteoporotic lumbar vertebrae following prophylactic kyphoplasty with different candidate materials. <i>Spine</i> , <b>2007</b> , 32, 1400-5	3.3	15
85	Influence of changes in stem positioning on femoral loading after THR using a short-stemmed hip implant. <i>Clinical Biomechanics</i> , <b>2007</b> , 22, 431-9	2.2	50
84	Endochondral ossification in vitro is influenced by mechanical bending. <i>Bone</i> , <b>2007</b> , 40, 597-603	4.7	12
83	Timely Fracture-Healing Requires Optimization of Axial Fixation Stability. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2007</b> , 89, 1575-1585	5.6	73
82	Gene identification and analysis of transcripts differentially regulated in fracture healing by EST sequencing in the domestic sheep. <i>BMC Genomics</i> , <b>2006</b> , 7, 172	4.5	22
81	CYR61 (CCN1) protein expression during fracture healing in an ovine tibial model and its relation to the mechanical fixation stability. <i>Journal of Orthopaedic Research</i> , <b>2006</b> , 24, 254-62	3.8	40
80	Autologous bone marrow-derived cells enhance muscle strength following skeletal muscle crush injury in rats. <i>Tissue Engineering</i> , <b>2006</b> , 12, 361-7		52
79	The Zweymüller threaded cup: a choice in revision? Migration analysis and follow-up after 6 years. <i>Journal of Arthroplasty</i> , <b>2006</b> , 21, 497-502	4.4	7
78	Mechanical conditions in the initial phase of bone healing. <i>Clinical Biomechanics</i> , <b>2006</b> , 21, 646-55	2.2	76
77	Osteoclastic activity begins early and increases over the course of bone healing. <i>Bone</i> , <b>2006</b> , 38, 547-54	4.7	95
76	Instability prolongs the chondral phase during bone healing in sheep. <i>Bone</i> , <b>2006</b> , 38, 864-70	4.7	108
75	Simulation of cell differentiation in fracture healing: mechanically loaded composite scaffolds in a novel bioreactor system. <i>Tissue Engineering</i> , <b>2006</b> , 12, 201-8		35
74	Can physiological loading of the proximal femur be reproduced with conservative hip implants?. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, S126	2.9	
73	Tibio-femoral joint contact forces in sheep. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, 791-8	2.9	97



72	A survey of formal methods for determining the centre of rotation of ball joints. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, 2798-809	2.9	270
71	Response to: Stair climbing is more critical than walking in pre-clinical assessment of primary stability in cementless THA in vitro. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, 3087-3090	2.9	2
70	Physiologically-relevant boundary conditions. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, S645	2.9	1
69	Simulation of Cell Differentiation in Fracture Healing-Mechanically Loaded Composite Scaffolds in a Novel Bioreactor System. <i>Tissue Engineering</i> , <b>2006</b> , 060118075515006		
68	Simulation of Cell Differentiation in Fracture Healing-Mechanically Loaded Composite Scaffolds in a Novel Bioreactor System. <i>Tissue Engineering</i> , <b>2006</b> , 060127071904004		
67	Simulation of Cell Differentiation in Fracture Healing-Mechanically Loaded Composite Scaffolds in a Novel Bioreactor System. <i>Tissue Engineering</i> , <b>2006</b> , 060207125535001		
66	Atlas-basierte 3D-Rekonstruktion des Beckens aus 2D-Projektionsbildern <b>2006</b> , 26-30		1
65	Gait evaluation: a tool to monitor bone healing?. <i>Clinical Biomechanics</i> , <b>2005</b> , 20, 883-91	2.2	36
64	Do serological tissue turnover markers represent callus formation during fracture healing?. <i>Bone</i> , <b>2005</b> , 37, 669-77	4.7	29
63	Stress shielding in box and cylinder cervical interbody fusion cage designs. <i>Spine</i> , <b>2005</b> , 30, 908-14	3.3	28
62	On the influence of soft tissue coverage in the determination of bone kinematics using skin markers. <i>Journal of Orthopaedic Research</i> , <b>2005</b> , 23, 726-34	3.8	126
61	On the influence of mechanical conditions in osteochondral defect healing. <i>Journal of Biomechanics</i> , <b>2005</b> , 38, 843-51	2.9	50
60	Determination of muscle loading at the hip joint for use in pre-clinical testing. <i>Journal of Biomechanics</i> , <b>2005</b> , 38, 1155-63	2.9	215
59	Stair climbing is more critical than walking in pre-clinical assessment of primary stability in cementless THA in vitro. <i>Journal of Biomechanics</i> , <b>2005</b> , 38, 1143-54	2.9	75
58	Initial vascularization and tissue differentiation are influenced by fixation stability. <i>Journal of Orthopaedic Research</i> , <b>2005</b> , 23, 639-45	3.8	135
57	The course of bone healing is influenced by the initial shear fixation stability. <i>Journal of Orthopaedic Research</i> , <b>2005</b> , 23, 1022-8	3.8	150
56	Altered cartilage mechanics and histology in knee osteoarthritis: relation to clinical assessment (ICRS Grade). <i>Osteoarthritis and Cartilage</i> , <b>2005</b> , 13, 958-63	6.2	203
55	Poly(D,L-lactide) coating is capable of enhancing osseous integration of Schanz screws in the absence of infection. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2005</b> , 74, 608-16	3.5	6

54	Muskuloskeletale Belastungen im Schafshinterlauf: Mechanische Rahmenbedingungen der Heilung. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2005</b> , 36, 775-780	0.9	7
53	The morphology and biomechanical characteristics of subcutaneously implanted tissue-engineered human septal cartilage. <i>European Archives of Oto-Rhino-Laryngology</i> , <b>2005</b> , 262, 993-7	3.5	31
52	Surgical approach influences periprosthetic femoral bone density. <i>Clinical Orthopaedics and Related Research</i> , <b>2005</b> , 153-9	2.2	23
51	Musculoskeletal loading database: loading conditions of the proximal femur. <i>Theoretical Issues in Ergonomics Science</i> , <b>2005</b> , 6, 287-292	2.2	3
50	Angle stable locking reduces interfragmentary movements and promotes healing after unreamed nailing. Study of a displaced osteotomy model in sheep tibiae. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2005</b> , 87, 2028-37	5.6	60
49	Cementless stem fixation and primary stability under physiological-like loads in vitro. <i>Biomedizinische Technik</i> , <b>2005</b> , 50, 394-9	1.3	11
48	ANGLE STABLE LOCKING REDUCES INTERFRAGMENTARY MOVEMENTS AND PROMOTES HEALING AFTER UNREAMED NAILING. <i>Journal of Bone and Joint Surgery - Series A</i> , <b>2005</b> , 87, 2028-2037	5.6	28
47	A new device to detect early cartilage degeneration. <i>American Journal of Sports Medicine</i> , <b>2004</b> , 32, 693-8.8		29
46	Are bone turnover markers capable of predicting callus consolidation during bone healing?. <i>Calcified Tissue International</i> , <b>2004</b> , 75, 40-9	3.9	21
45	Does low-intensity pulsed ultrasound stimulate maturation of tissue-engineered cartilage?. <i>Journal of Biomedical Materials Research Part B</i> , <b>2004</b> , 68, 21-8		17
44	Verbesserung der knöchernen Integration von Schanz-Schrauben durch eine Poly(D,L-laktid) Beschichtung. <i>Materialwissenschaft Und Werkstofftechnik</i> , <b>2004</b> , 35, 192-197	0.9	
43	Tibio-femoral loading during human gait and stair climbing. <i>Journal of Orthopaedic Research</i> , <b>2004</b> , 22, 625-32	3.8	261
42	Comparison of unreamed nailing and external fixation of tibial diastases--mechanical conditions during healing and biological outcome. <i>Journal of Orthopaedic Research</i> , <b>2004</b> , 22, 1072-8	3.8	55
41	Distribution of bone mineral density with age and gender in the proximal tibia. <i>Clinical Biomechanics</i> , <b>2004</b> , 19, 370-6	2.2	23
40	Where should implants be anchored in the humeral head?. <i>Clinical Orthopaedics and Related Research</i> , <b>2003</b> , 139-47	2.2	102
39	Interfragmentary movements in the early phase of healing in distraction and correction osteotomies stabilized with ring fixators. <i>Langenbeck's Archives of Surgery</i> , <b>2003</b> , 387, 433-40	3.4	46
38	Proximal humeral fractures: how stiff should an implant be? A comparative mechanical study with new implants in human specimens. <i>Archives of Orthopaedic and Trauma Surgery</i> , <b>2003</b> , 123, 74-81	3.6	189
37	The influence of walking speed on kinetic and kinematic parameters in patients with osteoarthritis of the hip using a force-instrumented treadmill and standardised gait speeds. <i>Archives of Orthopaedic and Trauma Surgery</i> , <b>2003</b> , 123, 278-82	3.6	37

36	Does partial weight bearing unload a healing bone in external ring fixation?. <i>Langenbeck's Archives of Surgery</i> , <b>2003</b> , 388, 298-304	3.4	21
35	The influence of alignment on the musculo-skeletal loading conditions at the knee. <i>Langenbeck's Archives of Surgery</i> , <b>2003</b> , 388, 291-7	3.4	42
34	Temporal profile of microvascular disturbances in rat tibial periosteum following closed soft tissue trauma. <i>Langenbeck's Archives of Surgery</i> , <b>2003</b> , 388, 323-30	3.4	27
33	Significance of musculo-skeletal soft tissue trauma on pre-operative planning, surgery and healing. <i>Langenbeck's Archives of Surgery</i> , <b>2003</b> , 388, 279-80	3.4	2
32	Dose-dependent effects of combined IGF-I and TGF-beta1 application in a sheep cervical spine fusion model. <i>European Spine Journal</i> , <b>2003</b> , 12, 464-73	2.7	19
31	Straining of the intact and fractured proximal humerus under physiological-like loading. <i>Journal of Biomechanics</i> , <b>2003</b> , 36, 1865-73	2.9	46
30	The initial phase of fracture healing is specifically sensitive to mechanical conditions. <i>Journal of Orthopaedic Research</i> , <b>2003</b> , 21, 662-9	3.8	186
29	THA loading arising from increased femoral anteversion and offset may lead to critical cement stresses. <i>Journal of Orthopaedic Research</i> , <b>2003</b> , 21, 767-74	3.8	61
28	Biomechanical comparison of four anterior atlantoaxial plate systems. <i>Journal of Neurosurgery: Spine</i> , <b>2002</b> , 96, 313-20	2.8	10
27	Influence of cage design on interbody fusion in a sheep cervical spine model. <i>Journal of Neurosurgery: Spine</i> , <b>2002</b> , 96, 321-32	2.8	24
26	Interfragmentary motion in tibial osteotomies stabilized with ring fixators. <i>Clinical Orthopaedics and Related Research</i> , <b>2002</b> , 163-72	2.2	71
25	Biomechanical analysis of biodegradable interbody fusion cages augmented With poly(propylene glycol-co-fumaric acid). <i>Spine</i> , <b>2002</b> , 27, 1644-51	3.3	21
24	Mechanical conditions in the internal stabilization of proximal tibial defects. <i>Clinical Biomechanics</i> , <b>2002</b> , 17, 64-72	2.2	38
23	Comparison of BMP-2 and combined IGF-I/TGF-ss1 application in a sheep cervical spine fusion model. <i>European Spine Journal</i> , <b>2002</b> , 11, 482-93	2.7	26
22	Musculo-skeletal loading conditions at the hip during walking and stair climbing. <i>Journal of Biomechanics</i> , <b>2001</b> , 34, 883-93	2.9	332
21	Mechanical boundary conditions of fracture healing: borderline indications in the treatment of unreamed tibial nailing. <i>Journal of Biomechanics</i> , <b>2001</b> , 34, 639-50	2.9	94
20	Hip contact forces and gait patterns from routine activities. <i>Journal of Biomechanics</i> , <b>2001</b> , 34, 859-71	2.9	1514
19	Influence of femoral anteversion on proximal femoral loading: measurement and simulation in four patients. <i>Clinical Biomechanics</i> , <b>2001</b> , 16, 644-9	2.2	100

18	Chondrocyte death precedes structural damage in blunt impact trauma. <i>Clinical Orthopaedics and Related Research</i> , <b>2001</b> , 302-9	2.2	74
17	Biomechanical comparison of cervical spine interbody fusion cages. <i>Spine</i> , <b>2001</b> , 26, 1850-7	3.3	89
16	Mechanical quality of tissue engineered cartilage: results after 6 and 12 weeks in vivo. <i>Journal of Biomedical Materials Research Part B</i> , <b>2000</b> , 53, 673-7		57
15	Stress and micromotion in the taper lock joint of a modular segmental bone replacement prosthesis. <i>Journal of Biomechanics</i> , <b>2000</b> , 33, 1175-9	2.9	29
14	Initial stability of fully and partially cemented femoral stems. <i>Clinical Biomechanics</i> , <b>2000</b> , 15, 750-5	2.2	31
13	Comparison of three different plating techniques for the dorsum of the distal radius: a biomechanical study. <i>Journal of Hand Surgery</i> , <b>2000</b> , 25, 29-33	2.6	97
12	Fracture Gap Movement as a Function of Musculo-Skeletal Loading Conditions During Gait <b>1999</b> , 187-198		
11	A method to determine the 3-D stiffness of fracture fixation devices and its application to predict inter-fragmentary movement. <i>Journal of Biomechanics</i> , <b>1998</b> , 31, 247-52	2.9	50
10	Analysis of inter-fragmentary movement as a function of musculoskeletal loading conditions in sheep. <i>Journal of Biomechanics</i> , <b>1998</b> , 31, 201-10	2.9	92
9	Influence of muscle forces on femoral strain distribution. <i>Journal of Biomechanics</i> , <b>1998</b> , 31, 841-6	2.9	264
8	The effects of external mechanical stimulation on the healing of diaphyseal osteotomies fixed by flexible external fixation. <i>Clinical Biomechanics</i> , <b>1998</b> , 13, 359-364	2.2	94
7	Locking strength of Morse tapers used for modular segmental bone defect replacement prostheses. <i>Bio-Medical Materials and Engineering</i> , <b>1997</b> , 7, 277-284	1	
6	Internal forces and moments in the femur during walking. <i>Journal of Biomechanics</i> , <b>1997</b> , 30, 933-41	2.9	202
5	Locking strength of Morse tapers used for modular segmental bone defect replacement prostheses. <i>Bio-Medical Materials and Engineering</i> , <b>1997</b> , 7, 277-84	1	1
4	Variability of femoral muscle attachments. <i>Journal of Biomechanics</i> , <b>1996</b> , 29, 1185-90	2.9	108
3	Testing method for mechanical properties of fibrin glue. <i>Journal of Applied Biomaterials: an Official Journal of the Society for Biomaterials</i> , <b>1993</b> , 4, 341-346		3
2	HIF-stabilization prevents delayed fracture healing		1
1	Placental-expanded, mesenchymal cells improve muscle function following hip arthroplasty		3

