

Richard O C Oreffo

List of Publications by Citations

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343
papers

20,432
citations

74
h-index

133
g-index

355
ext. papers

22,508
ext. citations

7
avg, IF

6.88
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 343 | The control of human mesenchymal cell differentiation using nanoscale symmetry and disorder. <i>Nature Materials</i> , 2007 , 6, 997-1003 | 27 | 1967 |
| 342 | Harnessing nanotopography and integrin-matrix interactions to influence stem cell fate. <i>Nature Materials</i> , 2014 , 13, 558-69 | 27 | 736 |
| 341 | Osteogenesis and angiogenesis: the potential for engineering bone. <i>European Cells and Materials</i> , 2008 , 15, 100-14 | 4.3 | 701 |
| 340 | Nanoscale surfaces for the long-term maintenance of mesenchymal stem cell phenotype and multipotency. <i>Nature Materials</i> , 2011 , 10, 637-44 | 27 | 644 |
| 339 | Oxygen-derived free radicals stimulate osteoclastic bone resorption in rodent bone in vitro and in vivo. <i>Journal of Clinical Investigation</i> , 1990 , 85, 632-9 | 15.9 | 631 |
| 338 | Bone tissue engineering: hope vs hype. <i>Biochemical and Biophysical Research Communications</i> , 2002 , 292, 1-7 | 3.4 | 422 |
| 337 | Biofabrication of bone tissue: approaches, challenges and translation for bone regeneration. <i>Biomaterials</i> , 2016 , 83, 363-82 | 15.6 | 374 |
| 336 | Osteoprogenitor response to semi-ordered and random nanotopographies. <i>Biomaterials</i> , 2006 , 27, 2980-7 | 15.6 | 294 |
| 335 | Hypoxia inducible factors regulate pluripotency and proliferation in human embryonic stem cells cultured at reduced oxygen tensions. <i>Reproduction</i> , 2010 , 139, 85-97 | 3.8 | 288 |
| 334 | Osteoprogenitor response to defined topographies with nanoscale depths. <i>Biomaterials</i> , 2006 , 27, 1306-15 | 15.6 | 278 |
| 333 | Association between the abnormal expression of matrix-degrading enzymes by human osteoarthritic chondrocytes and demethylation of specific CpG sites in the promoter regions. <i>Arthritis and Rheumatism</i> , 2005 , 52, 3110-24 | | 258 |
| 332 | Activation of the bone-derived latent TGF beta complex by isolated osteoclasts. <i>Biochemical and Biophysical Research Communications</i> , 1989 , 158, 817-23 | 3.4 | 253 |
| 331 | Nanotopographical control of stem cell differentiation. <i>Journal of Tissue Engineering</i> , 2010 , 2010, 120623 | 7.5 | 247 |
| 330 | Human osteoprogenitor growth and differentiation on synthetic biodegradable structures after surface modification. <i>Bone</i> , 2001 , 29, 523-31 | 4.7 | 236 |
| 329 | Quality of life in sarcopenia and frailty. <i>Calcified Tissue International</i> , 2013 , 93, 101-20 | 3.9 | 235 |
| 328 | The use of nanoscale topography to modulate the dynamics of adhesion formation in primary osteoblasts and ERK/MAPK signalling in STRO-1+ enriched skeletal stem cells. <i>Biomaterials</i> , 2009 , 30, 5094-103 | 15.6 | 222 |
| 327 | Clay: new opportunities for tissue regeneration and biomaterial design. <i>Advanced Materials</i> , 2013 , 25, 4069-86 | 24 | 217 |

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| 326 | Fabrication of pillar-like titania nanostructures on titanium and their interactions with human skeletal stem cells. <i>Acta Biomaterialia</i> , 2009 , 5, 1433-41 | 10.8 | 216 |
| 325 | The potential of biomimesis in bone tissue engineering: lessons from the design and synthesis of invertebrate skeletons. <i>Bone</i> , 2002 , 30, 810-5 | 4.7 | 192 |
| 324 | The effect of the delivery of vascular endothelial growth factor and bone morphogenic protein-2 to osteoprogenitor cell populations on bone formation. <i>Biomaterials</i> , 2010 , 31, 1242-50 | 15.6 | 186 |
| 323 | The effect of anisotropic architecture on cell and tissue infiltration into tissue engineering scaffolds. <i>Biomaterials</i> , 2006 , 27, 5909-17 | 15.6 | 179 |
| 322 | Interconversion potential of cloned human marrow adipocytes in vitro. <i>Bone</i> , 1999 , 24, 549-54 | 4.7 | 165 |
| 321 | Biomimetic collagen scaffolds for human bone cell growth and differentiation. <i>Tissue Engineering</i> , 2004 , 10, 1148-59 | | 164 |
| 320 | Development of a clay based bioink for 3D cell printing for skeletal application. <i>Biofabrication</i> , 2017 , 9, 034103 | 10.5 | 163 |
| 319 | Mesenchymal stem cells: lineage, plasticity, and skeletal therapeutic potential. <i>Stem Cell Reviews and Reports</i> , 2005 , 1, 169-78 | 6.4 | 163 |
| 318 | Epithelial mechanobiology, skin wound healing, and the stem cell niche. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013 , 28, 397-409 | 4.1 | 155 |
| 317 | Bone Tissue Engineering. <i>Current Molecular Biology Reports</i> , 2015 , 1, 132-140 | 2 | 147 |
| 316 | Interactions with nanoscale topography: adhesion quantification and signal transduction in cells of osteogenic and multipotent lineage. <i>Journal of Biomedical Materials Research - Part A</i> , 2009 , 91, 195-208 | 5.4 | 142 |
| 315 | Bridging the regeneration gap: stem cells, biomaterials and clinical translation in bone tissue engineering. <i>Archives of Biochemistry and Biophysics</i> , 2008 , 473, 124-31 | 4.1 | 142 |
| 314 | Bone and metal: an orthopaedic perspective on osseointegration of metals. <i>Acta Biomaterialia</i> , 2014 , 10, 4043-57 | 10.8 | 141 |
| 313 | Adenoviral BMP-2 gene transfer in mesenchymal stem cells: in vitro and in vivo bone formation on biodegradable polymer scaffolds. <i>Biochemical and Biophysical Research Communications</i> , 2002 , 292, 144-52 | 3.4 | 141 |
| 312 | Skeletal progenitor cells and ageing human populations. <i>Clinical Science</i> , 1998 , 94, 549-55 | 6.5 | 139 |
| 311 | Adhesion formation of primary human osteoblasts and the functional response of mesenchymal stem cells to 330nm deep microgrooves. <i>Journal of the Royal Society Interface</i> , 2008 , 5, 1231-42 | 4.1 | 138 |
| 310 | Future potentials for using osteogenic stem cells and biomaterials in orthopedics. <i>Bone</i> , 1999 , 25, 5S-9S | 4.7 | 138 |
| 309 | Clay nanoparticles for regenerative medicine and biomaterial design: A review of clay bioactivity. <i>Biomaterials</i> , 2018 , 159, 204-214 | 15.6 | 131 |

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| 308 | Temporal analysis of rat growth plates: cessation of growth with age despite presence of a physis. <i>Journal of Histochemistry and Cytochemistry</i> , 2003 , 51, 373-83 | 3.4 | 130 |
| 307 | Induction of human osteoprogenitor chemotaxis, proliferation, differentiation, and bone formation by osteoblast stimulating factor-1/pleiotrophin: osteoconductive biomimetic scaffolds for tissue engineering. <i>Journal of Bone and Mineral Research</i> , 2003 , 18, 47-57 | 6.3 | 129 |
| 306 | Computational modelling of cell spreading and tissue regeneration in porous scaffolds. <i>Biomaterials</i> , 2007 , 28, 1926-40 | 15.6 | 125 |
| 305 | Tissue engineered bone using select growth factors: A comprehensive review of animal studies and clinical translation studies in man. <i>European Cells and Materials</i> , 2014 , 28, 166-207; discussion 207-8 | 4.3 | 124 |
| 304 | DNA demethylation at specific CpG sites in the IL1B promoter in response to inflammatory cytokines in human articular chondrocytes. <i>Arthritis and Rheumatism</i> , 2009 , 60, 3303-13 | | 123 |
| 303 | The effect of mesenchymal populations and vascular endothelial growth factor delivered from biodegradable polymer scaffolds on bone formation. <i>Biomaterials</i> , 2008 , 29, 1892-900 | 15.6 | 122 |
| 302 | Clay gels for the delivery of regenerative microenvironments. <i>Advanced Materials</i> , 2011 , 23, 3304-8 | 24 | 118 |
| 301 | Natural marine sponge fiber skeleton: a biomimetic scaffold for human osteoprogenitor cell attachment, growth, and differentiation. <i>Tissue Engineering</i> , 2003 , 9, 1159-66 | | 112 |
| 300 | Regulated transcription of human matrix metalloproteinase 13 (MMP13) and interleukin-1 β (IL1B) genes in chondrocytes depends on methylation of specific proximal promoter CpG sites. <i>Journal of Biological Chemistry</i> , 2013 , 288, 10061-10072 | 5.4 | 110 |
| 299 | Latent forms of transforming growth factor-beta (TGF beta) derived from bone cultures: identification of a naturally occurring 100-kDa complex with similarity to recombinant latent TGF beta. <i>Molecular Endocrinology</i> , 1991 , 5, 741-51 | | 110 |
| 298 | Nanotopographical control of human osteoprogenitor differentiation. <i>Current Stem Cell Research and Therapy</i> , 2007 , 2, 129-38 | 3.6 | 104 |
| 297 | Human osteoprogenitor bone formation using encapsulated bone morphogenetic protein 2 in porous polymer scaffolds. <i>Tissue Engineering</i> , 2004 , 10, 1037-45 | | 102 |
| 296 | Skeletal stem cell physiology on functionally distinct titania nanotopographies. <i>Biomaterials</i> , 2011 , 32, 7403-10 | 15.6 | 101 |
| 295 | The cell in the ink: Improving biofabrication by printing stem cells for skeletal regenerative medicine. <i>Biomaterials</i> , 2019 , 209, 10-24 | 15.6 | 99 |
| 294 | Using nanotopography and metabolomics to identify biochemical effectors of multipotency. <i>ACS Nano</i> , 2012 , 6, 10239-49 | 16.7 | 99 |
| 293 | Controlled differentiation of human bone marrow stromal cells using magnetic nanoparticle technology. <i>Tissue Engineering - Part A</i> , 2010 , 16, 3241-50 | 3.9 | 98 |
| 292 | Growth and differentiation of human bone marrow osteoprogenitors on novel calcium phosphate cements. <i>Biomaterials</i> , 1998 , 19, 1845-54 | 15.6 | 97 |
| 291 | Tissue engineering strategies for cartilage generation--micromass and three dimensional cultures using human chondrocytes and a continuous cell line. <i>Biochemical and Biophysical Research Communications</i> , 2005 , 333, 609-21 | 3.4 | 95 |

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| 290 | Gene delivery in bone tissue engineering: progress and prospects using viral and nonviral strategies. <i>Tissue Engineering</i> , 2004 , 10, 295-307 | | 95 |
| 289 | Concise review: bridging the gap: bone regeneration using skeletal stem cell-based strategies - where are we now?. <i>Stem Cells</i> , 2014 , 32, 35-44 | 5.8 | 93 |
| 288 | Patients with primary osteoarthritis show no change with ageing in the number of osteogenic precursors. <i>Scandinavian Journal of Rheumatology</i> , 1998 , 27, 415-24 | 1.9 | 93 |
| 287 | A review of hydrogel use in fracture healing and bone regeneration. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2016 , 10, 187-98 | 4.4 | 89 |
| 286 | Experimental characterization and computational modelling of two-dimensional cell spreading for skeletal regeneration. <i>Journal of the Royal Society Interface</i> , 2007 , 4, 1107-17 | 4.1 | 88 |
| 285 | Bridging the gap. <i>Nature</i> , 2005 , 433, 19 | 50.4 | 87 |
| 284 | Nanotopographical effects on mesenchymal stem cell morphology and phenotype. <i>Journal of Cellular Biochemistry</i> , 2014 , 115, 380-90 | 4.7 | 86 |
| 283 | Delivery systems for bone growth factors - the new players in skeletal regeneration. <i>Journal of Pharmacy and Pharmacology</i> , 2004 , 56, 415-27 | 4.8 | 86 |
| 282 | Development of specific collagen scaffolds to support the osteogenic and chondrogenic differentiation of human bone marrow stromal cells. <i>Biomaterials</i> , 2008 , 29, 3105-16 | 15.6 | 86 |
| 281 | Osteogenic and angiogenic tissue formation in high fidelity nanocomposite Laponite-gelatin bioinks. <i>Biofabrication</i> , 2019 , 11, 035027 | 10.5 | 85 |
| 280 | Versatile biocompatible polymer hydrogels: scaffolds for cell growth. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 978-82 | 16.4 | 85 |
| 279 | Intrauterine exposure to a maternal low protein diet reduces adult bone mass and alters growth plate morphology in rats. <i>Calcified Tissue International</i> , 2002 , 71, 493-8 | 3.9 | 85 |
| 278 | The epigenetic effect of glucosamine and a nuclear factor-kappa B (NF-kB) inhibitor on primary human chondrocytes--implications for osteoarthritis. <i>Biochemical and Biophysical Research Communications</i> , 2011 , 405, 362-7 | 3.4 | 83 |
| 277 | Characterization and multipotentiality of human fetal femur-derived cells: implications for skeletal tissue regeneration. <i>Stem Cells</i> , 2006 , 24, 1042-53 | 5.8 | 82 |
| 276 | Biomaterialized Polysaccharide Capsules for Encapsulation, Organization, and Delivery of Human Cell Types and Growth Factors. <i>Advanced Functional Materials</i> , 2005 , 15, 917-923 | 15.6 | 82 |
| 275 | Whole proteome analysis of osteoprogenitor differentiation induced by disordered nanotopography and mediated by ERK signalling. <i>Biomaterials</i> , 2009 , 30, 4723-31 | 15.6 | 80 |
| 274 | Dynamic Surfaces for the Study of Mesenchymal Stem Cell Growth through Adhesion Regulation. <i>ACS Nano</i> , 2016 , 10, 6667-79 | 16.7 | 79 |
| 273 | Embryonic and induced pluripotent stem cells: understanding, creating, and exploiting the nano-niche for regenerative medicine. <i>ACS Nano</i> , 2013 , 7, 1867-81 | 16.7 | 78 |

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| 272 | Immunoselection and adenoviral genetic modulation of human osteoprogenitors: in vivo bone formation on PLA scaffold. <i>Biochemical and Biophysical Research Communications</i> , 2002 , 299, 208-15 | 3.4 | 78 |
| 271 | Effect of vitamin A on bone resorption: evidence for direct stimulation of isolated chicken osteoclasts by retinol and retinoic acid. <i>Journal of Bone and Mineral Research</i> , 1988 , 3, 203-10 | 6.3 | 75 |
| 270 | Effects of TGFbeta and bFGF on the differentiation of human bone marrow stromal fibroblasts. <i>Cell Biology International</i> , 1999 , 23, 185-94 | 4.5 | 75 |
| 269 | Nanotopographical cues augment mesenchymal differentiation of human embryonic stem cells. <i>Small</i> , 2013 , 9, 2140-51 | 11 | 73 |
| 268 | Genomic expression of mesenchymal stem cells to altered nanoscale topographies. <i>Journal of the Royal Society Interface</i> , 2008 , 5, 1055-65 | 4.1 | 73 |
| 267 | Stochasticity and the molecular mechanisms of induced pluripotency. <i>PLoS ONE</i> , 2008 , 3, e3086 | 3.7 | 73 |
| 266 | Supercritical carbon dioxide generated vascular endothelial growth factor encapsulated poly(DL-lactic acid) scaffolds induce angiogenesis in vitro. <i>Biochemical and Biophysical Research Communications</i> , 2007 , 352, 135-41 | 3.4 | 73 |
| 265 | Loss of methylation in CpG sites in the NF- κ B enhancer elements of inducible nitric oxide synthase is responsible for gene induction in human articular chondrocytes. <i>Arthritis and Rheumatism</i> , 2013 , 65, 732-42 | | 71 |
| 264 | Bone-like Resorbable Silk-based Scaffolds for Load-bearing Osteoregenerative Applications. <i>Advanced Materials</i> , 2009 , 21, 75-78 | 24 | 71 |
| 263 | Evaluation of human bone marrow stromal cell growth on biodegradable polymer/bioglass composites. <i>Biochemical and Biophysical Research Communications</i> , 2006 , 342, 1098-107 | 3.4 | 69 |
| 262 | Application of an acoustofluidic perfusion bioreactor for cartilage tissue engineering. <i>Lab on A Chip</i> , 2014 , 14, 4475-85 | 7.2 | 67 |
| 261 | Strategies for cell manipulation and skeletal tissue engineering using high-throughput polymer blend formulation and microarray techniques. <i>Biomaterials</i> , 2010 , 31, 2216-28 | 15.6 | 67 |
| 260 | A surprisingly poor correlation between in vitro and in vivo testing of biomaterials for bone regeneration: results of a multicentre analysis. <i>European Cells and Materials</i> , 2016 , 31, 312-22 | 4.3 | 66 |
| 259 | Inhibition of bone resorption by inorganic phosphate is mediated by both reduced osteoclast formation and decreased activity of mature osteoclasts. <i>Journal of Bone and Mineral Research</i> , 1991 , 6, 473-8 | 6.3 | 64 |
| 258 | Pleiotrophin/Osteoblast-stimulating factor 1: dissecting its diverse functions in bone formation. <i>Journal of Bone and Mineral Research</i> , 2002 , 17, 2009-20 | 6.3 | 64 |
| 257 | Biocompatibility and osteogenic potential of human fetal femur-derived cells on surface selective laser sintered scaffolds. <i>Acta Biomaterialia</i> , 2009 , 5, 2063-71 | 10.8 | 59 |
| 256 | MagicWand: a single, designed peptide that assembles to stable, ordered alpha-helical fibers. <i>Biochemistry</i> , 2008 , 47, 10365-71 | 3.2 | 59 |
| 255 | Skeletal stem cells: phenotype, biology and environmental niches informing tissue regeneration. <i>Molecular and Cellular Endocrinology</i> , 2008 , 288, 11-21 | 4.4 | 56 |

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| 254 | Modulation of osteogenesis and adipogenesis by human serum in human bone marrow cultures. <i>European Journal of Cell Biology</i> , 1997 , 74, 251-61 | 6.1 | 56 |
| 253 | Hope versus hype: what can additive manufacturing realistically offer trauma and orthopedic surgery?. <i>Regenerative Medicine</i> , 2014 , 9, 535-49 | 2.5 | 55 |
| 252 | Development of in vivo muCT evaluation of neovascularisation in tissue engineered bone constructs. <i>Bone</i> , 2008 , 43, 195-202 | 4.7 | 55 |
| 251 | Absence of the lysophosphatidic acid receptor LPA1 results in abnormal bone development and decreased bone mass. <i>Bone</i> , 2011 , 49, 395-403 | 4.7 | 54 |
| 250 | A microarray approach to the identification of polyurethanes for the isolation of human skeletal progenitor cells and augmentation of skeletal cell growth. <i>Biomaterials</i> , 2009 , 30, 1045-55 | 15.6 | 54 |
| 249 | Genetic manipulation of human mesenchymal progenitors to promote chondrogenesis using "bead-in-bead" polysaccharide capsules. <i>Biomaterials</i> , 2008 , 29, 58-65 | 15.6 | 54 |
| 248 | The chorioallantoic membrane (CAM) assay for the study of human bone regeneration: a refinement animal model for tissue engineering. <i>Scientific Reports</i> , 2016 , 6, 32168 | 4.9 | 54 |
| 247 | A genomics approach in determining nanotopographical effects on MSC phenotype. <i>Biomaterials</i> , 2013 , 34, 2177-84 | 15.6 | 53 |
| 246 | In Vivo Assessment of Bone Regeneration in Alginate/Bone ECM Hydrogels with Incorporated Skeletal Stem Cells and Single Growth Factors. <i>PLoS ONE</i> , 2015 , 10, e0145080 | 3.7 | 53 |
| 245 | Association of reduced type IX collagen gene expression in human osteoarthritic chondrocytes with epigenetic silencing by DNA hypermethylation. <i>Arthritis and Rheumatology</i> , 2014 , 66, 3040-51 | 9.5 | 53 |
| 244 | Maternal protein deficiency affects mesenchymal stem cell activity in the developing offspring. <i>Bone</i> , 2003 , 33, 100-7 | 4.7 | 53 |
| 243 | Expression of estrogen receptor-alpha in cells of the osteoclastic lineage. <i>Histochemistry and Cell Biology</i> , 1999 , 111, 125-33 | 2.4 | 53 |
| 242 | Epigenetic regulation of interleukin-8, an inflammatory chemokine, in osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2015 , 23, 1946-54 | 6.2 | 52 |
| 241 | Inhibitory effects of the bone-derived growth factors osteoinductive factor and transforming growth factor-beta on isolated osteoclasts. <i>Endocrinology</i> , 1990 , 126, 3069-75 | 4.8 | 52 |
| 240 | Osteogenic lineage restriction by osteoprogenitors cultured on nanometric grooved surfaces: the role of focal adhesion maturation. <i>Acta Biomaterialia</i> , 2014 , 10, 651-60 | 10.8 | 51 |
| 239 | Bone induction at physiological doses of BMP through localization by clay nanoparticle gels. <i>Biomaterials</i> , 2016 , 99, 16-23 | 15.6 | 51 |
| 238 | Human bone marrow osteoprogenitors express estrogen receptor-alpha and bone morphogenetic proteins 2 and 4 mRNA during osteoblastic differentiation 1999 , 75, 382-392 | | 49 |
| 237 | Osteoprogenitor response to low-adhesion nanotopographies originally fabricated by electron beam lithography. <i>Journal of Materials Science: Materials in Medicine</i> , 2007 , 18, 1211-8 | 4.5 | 48 |

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| 236 | Human iPSC-derived MSCs (iMSCs) from aged individuals acquire a rejuvenation signature. <i>Stem Cell Research and Therapy</i> , 2019 , 10, 100 | 8.3 | 46 |
| 235 | Evaluation of skeletal tissue repair, part 1: assessment of novel growth-factor-releasing hydrogels in an ex vivo chick femur defect model. <i>Acta Biomaterialia</i> , 2014 , 10, 4186-96 | 10.8 | 46 |
| 234 | Changes in the antiangiogenic properties of articular cartilage in osteoarthritis. <i>Journal of Orthopaedic Science</i> , 2003 , 8, 849-57 | 1.6 | 46 |
| 233 | Effects of targeted overexpression of pleiotrophin on postnatal bone development. <i>Biochemical and Biophysical Research Communications</i> , 2002 , 298, 324-32 | 3.4 | 46 |
| 232 | Characterization of New PEEK/HA Composites with 3D HA Network Fabricated by Extrusion Freeforming. <i>Molecules</i> , 2016 , 21, | 4.8 | 46 |
| 231 | Skeletal tissue regeneration: current approaches, challenges, and novel reconstructive strategies for an aging population. <i>Tissue Engineering - Part B: Reviews</i> , 2011 , 17, 307-20 | 7.9 | 45 |
| 230 | Suppressors of cytokine signalling (SOCS) are reduced in osteoarthritis. <i>Biochemical and Biophysical Research Communications</i> , 2011 , 407, 54-9 | 3.4 | 45 |
| 229 | Strategies to promote chondrogenesis and osteogenesis from human bone marrow cells and articular chondrocytes encapsulated in polysaccharide templates. <i>Tissue Engineering</i> , 2006 , 12, 2789-99 | | 45 |
| 228 | Nanotopography controls cell cycle changes involved with skeletal stem cell self-renewal and multipotency. <i>Biomaterials</i> , 2017 , 116, 10-20 | 15.6 | 44 |
| 227 | Evaluation of skeletal tissue repair, part 2: enhancement of skeletal tissue repair through dual-growth-factor-releasing hydrogels within an ex vivo chick femur defect model. <i>Acta Biomaterialia</i> , 2014 , 10, 4197-205 | 10.8 | 43 |
| 226 | Intrauterine programming of bone. Part 2: alteration of skeletal structure. <i>Osteoporosis International</i> , 2008 , 19, 157-67 | 5.3 | 43 |
| 225 | Mammalian cell survival and processing in supercritical CO ₂ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 7426-31 | 11.5 | 43 |
| 224 | Expansion of human bone marrow stromal cells on poly-(DL-lactide-co-glycolide) (PDL LGA) hollow fibres designed for use in skeletal tissue engineering. <i>Biomaterials</i> , 2007 , 28, 5332-43 | 15.6 | 42 |
| 223 | The interaction of human bone marrow cells with nanotopographical features in three dimensional constructs. <i>Journal of Biomedical Materials Research - Part A</i> , 2006 , 79, 431-9 | 5.4 | 42 |
| 222 | Stimulation of human bone marrow stromal cells using growth factor encapsulated calcium carbonate porous microspheres. <i>Journal of Materials Chemistry</i> , 2004 , 14, 2206 | | 41 |
| 221 | A comparison of polymer and polymer-hydroxyapatite composite tissue engineered scaffolds for use in bone regeneration. An in vitro and in vivo study. <i>Journal of Biomedical Materials Research - Part A</i> , 2014 , 102, 2613-24 | 5.4 | 40 |
| 220 | MicroRNA-146a regulates human foetal femur derived skeletal stem cell differentiation by down-regulating SMAD2 and SMAD3. <i>PLoS ONE</i> , 2014 , 9, e98063 | 3.7 | 39 |
| 219 | Gene therapy used for tissue engineering applications. <i>Journal of Pharmacy and Pharmacology</i> , 2007 , 59, 329-50 | 4.8 | 39 |

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| 218 | Mineralized polysaccharide capsules as biomimetic microenvironments for cell, gene and growth factor delivery in tissue engineering. <i>Soft Matter</i> , 2006 , 2, 732-737 | 3.6 | 39 |
| 217 | Phenotypic and molecular heterogeneity in fibrodysplasia ossificans progressiva. <i>Calcified Tissue International</i> , 1999 , 65, 250-5 | 3.9 | 39 |
| 216 | The application of human bone marrow stromal cells and poly(dl-lactic acid) as a biological bone graft extender in impaction bone grafting. <i>Biomaterials</i> , 2008 , 29, 3221-7 | 15.6 | 38 |
| 215 | Trapping single human osteoblast-like cells from a heterogeneous population using a dielectrophoretic microfluidic device. <i>Biomicrofluidics</i> , 2010 , 4, | 3.2 | 37 |
| 214 | Intrauterine programming of bone. Part 1: alteration of the osteogenic environment. <i>Osteoporosis International</i> , 2008 , 19, 147-56 | 5.3 | 37 |
| 213 | Fabrication of hydroxyapatite sponges by dextran sulphate/amino acid templating. <i>Biomaterials</i> , 2005 , 26, 6652-6 | 15.6 | 37 |
| 212 | Epigenetic modifiers influence lineage commitment of human bone marrow stromal cells: Differential effects of 5-aza-deoxycytidine and trichostatin A. <i>Differentiation</i> , 2011 , 81, 35-41 | 3.5 | 36 |
| 211 | An ex vivo model for chondrogenesis and osteogenesis. <i>Biomaterials</i> , 2007 , 28, 2839-49 | 15.6 | 36 |
| 210 | Cells cultured from the growing tip of red deer antler express alkaline phosphatase and proliferate in response to insulin-like growth factor-I. <i>Journal of Endocrinology</i> , 1994 , 143, R9-16 | 4.7 | 36 |
| 209 | High-resolution 3D imaging of osteocytes and computational modelling in mechanobiology: insights on bone development, ageing, health and disease. <i>European Cells and Materials</i> , 2016 , 31, 264-95 | 4.3 | 36 |
| 208 | MiR-146b is down-regulated during the chondrogenic differentiation of human bone marrow derived skeletal stem cells and up-regulated in osteoarthritis. <i>Scientific Reports</i> , 2017 , 7, 46704 | 4.9 | 35 |
| 207 | Biological and mechanical enhancement of impacted allograft seeded with human bone marrow stromal cells: potential clinical role in impaction bone grafting. <i>Regenerative Medicine</i> , 2006 , 1, 457-67 | 2.5 | 34 |
| 206 | A new take on an old story: chick limb organ culture for skeletal niche development and regenerative medicine evaluation. <i>European Cells and Materials</i> , 2013 , 26, 91-106; discussion 106 | 4.3 | 34 |
| 205 | Mechanical phenotyping of primary human skeletal stem cells in heterogeneous populations by real-time deformability cytometry. <i>Integrative Biology (United Kingdom)</i> , 2016 , 8, 616-23 | 3.7 | 33 |
| 204 | Disordered protein-graphene oxide co-assembly and supramolecular biofabrication of functional fluidic devices. <i>Nature Communications</i> , 2020 , 11, 1182 | 17.4 | 32 |
| 203 | Quantification of intracellular payload release from polymersome nanoparticles. <i>Scientific Reports</i> , 2016 , 6, 29460 | 4.9 | 32 |
| 202 | Prospective isolation of human bone marrow stromal cell subsets: A comparative study between Stro-1-, CD146- and CD105-enriched populations. <i>Journal of Tissue Engineering</i> , 2014 , 5, 2041731414551763 | 7.5 | 32 |
| 201 | Surface mobility regulates skeletal stem cell differentiation. <i>Integrative Biology (United Kingdom)</i> , 2012 , 4, 531-9 | 3.7 | 32 |

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| 200 | Proteomic analysis of human osteoprogenitor response to disordered nanotopography. <i>Journal of the Royal Society Interface</i> , 2009 , 6, 1075-86 | 4.1 | 32 |
| 199 | DNA methylation of the RUNX2 P1 promoter mediates MMP13 transcription in chondrocytes. <i>Scientific Reports</i> , 2017 , 7, 7771 | 4.9 | 31 |
| 198 | Printing bone in a gel: using nanocomposite bioink to print functionalised bone scaffolds. <i>Materials Today Bio</i> , 2019 , 4, 100028 | 9.9 | 31 |
| 197 | Alternative and complementary therapies in osteoarthritis and cartilage repair. <i>Aging Clinical and Experimental Research</i> , 2020 , 32, 547-560 | 4.8 | 31 |
| 196 | Nanoclay-based 3D printed scaffolds promote vascular ingrowth ex vivo and generate bone mineral tissue in vitro and in vivo. <i>Biofabrication</i> , 2020 , 12, 035010 | 10.5 | 31 |
| 195 | The Chorioallantoic Membrane Assay for Biomaterial Testing in Tissue Engineering: A Short-Term In Vivo Preclinical Model. <i>Tissue Engineering - Part C: Methods</i> , 2017 , 23, 938-952 | 2.9 | 31 |
| 194 | Maternal high-fat diet: effects on offspring bone structure. <i>Osteoporosis International</i> , 2010 , 21, 1703-14 | 5.3 | 31 |
| 193 | Bisphosphonate nanoclay edge-site interactions facilitate hydrogel self-assembly and sustained growth factor localization. <i>Nature Communications</i> , 2020 , 11, 1365 | 17.4 | 30 |
| 192 | Augmentation of skeletal tissue formation in impaction bone grafting using vaterite microsphere biocomposites. <i>Biomaterials</i> , 2009 , 30, 1918-27 | 15.6 | 30 |
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