

# Eileen Gentleman

## List of Publications by Citations

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

66

papers

3,731

citations

29

h-index

61

g-index

71

ext. papers

4,320

ext. citations

9.2

avg, IF

5.44

L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 66 | The effects of strontium-substituted bioactive glasses on osteoblasts and osteoclasts in vitro. <i>Biomaterials</i> , <b>2010</b> , 31, 3949-56  | 15.6 | 458       |
| 65 | The role of intracellular calcium phosphate in osteoblast-mediated bone apatite formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14170-5 | 11.5 | 335       |
| 64 | Substrate stiffness affects early differentiation events in embryonic stem cells. <i>European Cells and Materials</i> , <b>2009</b> , 18, 1-13; discussion 13-4  | 4.3  | 322       |
| 63 | Mechanical characterization of collagen fibers and scaffolds for tissue engineering. <i>Biomaterials</i> , <b>2003</b> , 24, 3805-13   | 15.6 | 300       |
| 62 | Comparative materials differences revealed in engineered bone as a function of cell-specific differentiation. <i>Nature Materials</i> , <b>2009</b> , 8, 763-70  | 27   | 193       |
| 61 | Nano-analytical electron microscopy reveals fundamental insights into human cardiovascular tissue calcification. <i>Nature Materials</i> , <b>2013</b> , 12, 576-83  | 27   | 190       |
| 60 | The role of surface free energy in osteoblastBiomaterial interactions. <i>International Materials Reviews</i> , <b>2014</b> , 59, 417-429  | 16.1 | 123       |
| 59 | Anisotropic fibrous scaffolds for articular cartilage regeneration. <i>Tissue Engineering - Part A</i> , <b>2012</b> , 18, 2073-83   | 3.9  | 117       |
| 58 | Bioactive Glass Scaffolds for Bone Regeneration. <i>Elements</i> , <b>2007</b> , 3, 393-399  | 3.8  | 103       |
| 57 | Scaffolds for stem cells. <i>Materials Today</i> , <b>2006</b> , 9, 26-33  | 21.8 | 103       |
| 56 | Evolving insights in cell-matrix interactions: elucidating how non-soluble properties of the extracellular niche direct stem cell fate. <i>Acta Biomaterialia</i> , <b>2015</b> , 11, 3-16                     | 10.8 | 94        |
| 55 | Materials characterisation and cytotoxic assessment of strontium-substituted bioactive glasses for bone regeneration. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 8934                           |      | 90        |
| 54 | Extracellular matrix-mediated osteogenic differentiation of murine embryonic stem cells. <i>Biomaterials</i> , <b>2010</b> , 31, 3244-52   | 15.6 | 78        |
| 53 | Surface properties and ion release from fluoride-containing bioactive glasses promote osteoblast differentiation and mineralization in vitro. <i>Acta Biomaterialia</i> , <b>2013</b> , 9, 5771-9              | 10.8 | 75        |
| 52 | Exploiting Advanced Hydrogel Technologies to Address Key Challenges in Regenerative Medicine. <i>Advanced Healthcare Materials</i> , <b>2018</b> , 7, e1700939   | 10.1 | 66        |
| 51 | Bi-directional cell-pericellular matrix interactions direct stem cell fate. <i>Nature Communications</i> , <b>2018</b> , 9, 4049   | 17.4 | 65        |
| 50 | Development of ligament-like structural organization and properties in cell-seeded collagen scaffolds in vitro. <i>Annals of Biomedical Engineering</i> , <b>2006</b> , 34, 726-36                             | 4.7  | 64        |

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|----|---|------|----|
| 49 | Strontium- and zinc-alginate hydrogels for bone tissue engineering. <i>Tissue Engineering - Part A</i> , <b>2011</b> , 17, 2713-22  | 3.9  | 60 |
| 48 | Benefits and drawbacks of zinc in glass ionomer bone cements. <i>Biomedical Materials (Bristol)</i> , <b>2011</b> , 6, 045007   | 3.5  | 60 |
| 47 | Collagen composite biomaterials resist contraction while allowing development of adipocytic soft tissue in vitro. <i>Tissue Engineering</i> , <b>2006</b> , 12, 1639-49   |      | 59 |
| 46 | Monomeric, porous type II collagen scaffolds promote chondrogenic differentiation of human bone marrow mesenchymal stem cells in vitro. <i>Scientific Reports</i> , <b>2017</b> , 7, 43519  | 4.9  | 54 |
| 45 | Sparse feature selection methods identify unexpected global cellular response to strontium-containing materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 4280-5 | 11.5 | 52 |
| 44 | The role of material structure and mechanical properties in cell-matrix interactions. <i>Journal of Materials Chemistry B</i> , <b>2014</b> , 2, 2345-2356  | 7.3  | 52 |
| 43 | Characterization of porcine aortic valvular interstitial cell calcified nodules. <i>PLoS ONE</i> , <b>2012</b> , 7, e48154  | 3.7  | 39 |
| 42 | Differential Regulation of Human Bone Marrow Mesenchymal Stromal Cell Chondrogenesis by Hypoxia Inducible Factor-1 $\beta$ Hydroxylase Inhibitors. <i>Stem Cells</i> , <b>2018</b> , 36, 1380-1392                                  | 5.8  | 38 |
| 41 | Short collagen fibers provide control of contraction and permeability in fibroblast-seeded collagen gels. <i>Tissue Engineering</i> , <b>2004</b> , 10, 421-7   |      | 38 |
| 40 | Perivascular Stem Cells at the Tip of Mouse Incisors Regulate Tissue Regeneration. <i>Journal of Bone and Mineral Research</i> , <b>2016</b> , 31, 514-23   | 6.3  | 32 |
| 39 | Harnessing the secreted extracellular matrix to engineer tissues. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 357-363   | 19   | 30 |
| 38 | Multiscale analyses reveal native-like lamellar bone repair and near perfect bone-contact with porous strontium-loaded bioactive glass. <i>Biomaterials</i> , <b>2019</b> , 209, 152-162  | 15.6 | 29 |
| 37 | Composition of Mineral Produced by Dental Mesenchymal Stem Cells. <i>Journal of Dental Research</i> , <b>2015</b> , 94, 1568-74   | 8.1  | 29 |
| 36 | Hypoxia impacts human MSC response to substrate stiffness during chondrogenic differentiation. <i>Acta Biomaterialia</i> , <b>2019</b> , 89, 73-83  | 10.8 | 27 |
| 35 | Historic and current strategies in bone tissue engineering: do we have a hope in Hench?. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2006</b> , 17, 1029-35   | 4.5  | 26 |
| 34 | Neighboring cells override 3D hydrogel matrix cues to drive human MSC quiescence. <i>Biomaterials</i> , <b>2018</b> , 176, 13-23  | 15.6 | 25 |
| 33 | Inadequate fine-tuning of protein synthesis and failure of amino acid homeostasis following inhibition of the ATPase VCP/p97. <i>Cell Death and Disease</i> , <b>2015</b> , 6, e2031  | 9.8  | 23 |
| 32 | ILC1 drive intestinal epithelial and matrix remodelling. <i>Nature Materials</i> , <b>2021</b> , 20, 250-259  | 27   | 23 |

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|----|---|------|----|
| 31 | Optimisation of lithium-substituted bioactive glasses to tailor cell response for hard tissue repair. <i>Journal of Materials Science</i> , <b>2017</b> , 52, 8832-8844   | 4.3  | 21 |
| 30 | Collective Cell Behavior in Mechanosensing of Substrate Thickness. <i>Biophysical Journal</i> , <b>2018</b> , 114, 2743-2755  | 20   |    |
| 29 | Translation Approach for Dentine Regeneration Using GSK-3 Antagonists. <i>Journal of Dental Research</i> , <b>2020</b> , 99, 544-551  | 8.1  | 16 |
| 28 | Therapeutic Ion-Releasing Bioactive Glass Ionomer Cements with Improved Mechanical Strength and Radiopacity. <i>Frontiers in Materials</i> , <b>2015</b> , 2,   | 4    | 16 |
| 27 | Gene-expression analysis reveals that embryonic stem cells cultured under osteogenic conditions produce mineral non-specifically compared to marrow stromal cells or osteoblasts. <i>European Cells and Materials</i> , <b>2012</b> , 24, 211-23  | 4.3  | 16 |
| 26 | Measuring the elastic modulus of soft culture surfaces and three-dimensional hydrogels using atomic force microscopy. <i>Nature Protocols</i> , <b>2021</b> , 16, 2418-2449   | 18.8 | 15 |
| 25 | Aortic valve calcification: a bone of contention. <i>European Heart Journal</i> , <b>2017</b> , 38, 1189-1193   | 9.5  | 13 |
| 24 | Wharton's jelly mesenchymal stromal/stem cells derived under chemically defined animal product-free low oxygen conditions are rich in MSCA-1(+) subpopulation. <i>Regenerative Medicine</i> , <b>2014</b> , 9, 723-32   | 2.5  | 12 |
| 23 | A comparison of lithium-substituted phosphate and borate bioactive glasses for mineralised tissue repair. <i>Dental Materials</i> , <b>2019</b> , 35, 919-927   | 5.7  | 11 |
| 22 | Three-dimensional niche stiffness synergizes with Wnt7a to modulate the extent of satellite cell symmetric self-renewal divisions. <i>Molecular Biology of the Cell</i> , <b>2020</b> , 31, 1703-1713   | 3.5  | 10 |
| 21 | Adhesive Hydrogels for Maxillofacial Tissue Regeneration Using Minimally Invasive Procedures. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e1901134  | 10.1 | 10 |
| 20 | Hypoxia Inducible Factor-1 $\alpha$ in Osteochondral Tissue Engineering. <i>Tissue Engineering - Part B: Reviews</i> , <b>2020</b> , 26, 105-115  | 7.9  | 10 |
| 19 | Correlative spectroscopy of silicates in mineralised nodules formed from osteoblasts. <i>Nanoscale</i> , <b>2013</b> , 5, 7544-51   | 7.7  | 9  |
| 18 | Rethinking Cancer Immunotherapy by Embracing and Engineering Complexity. <i>Trends in Biotechnology</i> , <b>2020</b> , 38, 1054-1065   | 15.1 | 7  |
| 17 | A Hydrogel-Integrated Culture Device to Interrogate T Cell Activation with Physicochemical Cues. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 47355-47367  | 9.5  | 7  |
| 16 | Matrix-associated chondrocyte transplantation for reconstruction of articulating surfaces in the temporomandibular joint: a pilot study covering medium- and long-term outcomes of 6 patients. <i>Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology</i> , <b>2018</b> , 126, 117-128 | 2    | 5  |
| 15 | An engineered, quantifiable in vitro model for analysing the effect of proteostasis-targeting drugs on tissue physical properties. <i>Biomaterials</i> , <b>2018</b> , 183, 102-113   | 15.6 | 5  |
| 14 | Pluripotency state regulates cytoneme selectivity and self-organization of embryonic stem cells. <i>Journal of Cell Biology</i> , <b>2021</b> , 220,  | 7.3  | 5  |

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|----|---|------|---|
| 13 | Intrinsic Mechanical Cues and Their Impact on Stem Cells and Embryogenesis. <i>Frontiers in Cell and Developmental Biology</i> , <b>2021</b> , 9, 761871  | 5.7  | 4 |
| 12 | Selectively Cross-Linked Tetra-PEG Hydrogels Provide Control over Mechanical Strength with Minimal Impact on Diffusivity. <i>ACS Biomaterials Science and Engineering</i> , <b>2021</b> , 7, 4293-4304  | 5.5  | 4 |
| 11 | An integrated pipeline for high-throughput screening and profiling of spheroids using simple live image analysis of frame to frame variations. <i>Methods</i> , <b>2021</b> , 190, 33-43  | 4.6  | 3 |
| 10 | Operating curves to characterize the contraction of fibroblast-seeded collagen gel/collagen fiber composite biomaterials: effect of fiber mass. <i>Plastic and Reconstructive Surgery</i> , <b>2007</b> , 119, 508-16                                 | 2.7  | 2 |
| 9  | Complementary techniques to analyse pericellular matrix formation by human MSC within hyaluronic acid hydrogels. <i>Materials Advances</i> , <b>2020</b> , 1, 2888-2896   | 3.3  | 2 |
| 8  | GSK3 Inhibitor-Induced Dentinogenesis Using a Hydrogel. <i>Journal of Dental Research</i> , <b>2021</b> , 220345211080652   |      | 2 |
| 7  | A modified glass ionomer cement to mediate dentine repair. <i>Dental Materials</i> , <b>2021</b> , 37, 1307-1315  | 5.7  | 2 |
| 6  | Design considerations for engineering 3D models to study vascular pathologies in vitro. <i>Acta Biomaterialia</i> , <b>2021</b> , 132, 114-128  | 10.8 | 2 |
| 5  | Collagen Composite Biomaterials Resist Contraction While Allowing Development of Adipocytic Soft Tissue In Vitro. <i>Tissue Engineering</i> , <b>2006</b> , 060706073730043   |      | 1 |
| 4  | Collective cell behaviour in mechanosensing of substrate thickness  |      | 1 |
| 3  | ILC1-derived TGF $\beta$ drives intestinal remodelling  |      | 1 |
| 2  | OP13 Mucosal organoids capture Innate Lymphoid Cells (ILC) tissue-specific development and reveal that Inflammatory Bowel Disease-associated ILC modulate intestinal remodelling. <i>Journal of Crohn's and Colitis</i> , <b>2021</b> , 15, S013-S014 | 1.5  |   |
| 1  | Inflation comes before the fall: How epithelial stretch drives crypt fission. <i>Cell Stem Cell</i> , <b>2021</b> , 28, 1505-1806   |      |   |