# Shelly R Peyton

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5919960/publications.pdf

Version: 2024-02-01

| | | | |
|---|---|---|---|
| 57 papers | 3,719 citations | 185998 28 h-index | 174990 52 g-index |
| 71 all docs | 71 docs citations | 71 times ranked | 5542 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Extracellular matrix rigidity governs smooth muscle cell motility in a biphasic fashion. Journal of Cellular Physiology, 2005, 204, 198-209. | 2.0 | 580 |
| 2 | The use of poly(ethylene glycol) hydrogels to investigate the impact of ECM chemistry and mechanics on smooth muscle cells. Biomaterials, 2006, 27, 4881-4893. | 5.7 | 318 |
| 3 | Intrinsic mechanical properties of the extracellular matrix affect the behavior of pre-osteoblastic MC3T3-E1 cells. American Journal of Physiology - Cell Physiology, 2006, 290, C1640-C1650. | 2.1 | 219 |
| 4 | The effects of matrix stiffness and RhoA on the phenotypic plasticity of smooth muscle cells in a 3-D biosynthetic hydrogel system. Biomaterials, 2008, 29, 2597-2607. | 5.7 | 195 |
| 5 | ECM Compliance Regulates Osteogenesis by Influencing MAPK Signaling Downstream of RhoA and ROCK. Journal of Bone and Mineral Research, 2009, 24, 886-898. | 3.1 | 189 |
| 6 | The emergence of ECM mechanics and cytoskeletal tension as important regulators of cell function. Cell Biochemistry and Biophysics, 2007, 47, 300-320. | 0.9 | 169 |
| 7 | Mechanics of intact bone marrow. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 50, 299-307. | 1.5 | 149 |
| 8 | The regulation of osteogenesis by ECM rigidity in MC3T3-E1 cells requires MAPK activation. Journal of Cellular Physiology, 2007, 211, 661-672. | 2.0 | 115 |
| 9 | Sorafenib resistance and JNK signaling in carcinoma during extracellular matrix stiffening. Biomaterials, 2014, 35, 5749-5759. | 5.7 | 113 |
| 10 | Fewer Bacteria Adhere to Softer Hydrogels. ACS Applied Materials & Interfaces, 2015, 7, 19562-19569. | 4.0 | 104 |
| 11 | Marrowâ€Derived stem cell motility in 3D synthetic scaffold is governed by geometry along with adhesivity and stiffness. Biotechnology and Bioengineering, 2011, 108, 1181-1193. | 1.7 | 101 |
| 12 | Acetyl-CoA promotes glioblastoma cell adhesion and migration through Ca<sup>2+</sup>â€“NFAT signaling. Genes and Development, 2018, 32, 497-511. | 2.7 | 97 |
| 13 | Tumor cellâ€“organized fibronectin maintenance of a dormant breast cancer population. Science Advances, 2020, 6, eaaz4157. | 4.7 | 92 |
| 14 | Cavitation in soft matter. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9157-9165. | 3.3 | 86 |
| 15 | Cross-platform mechanical characterization of lung tissue. PLoS ONE, 2018, 13, e0204765. | 1.1 | 85 |
| 16 | Control of thiol-maleimide reaction kinetics in PEG hydrogel networks. Acta Biomaterialia, 2018, 70, 120-128. | 4.1 | 83 |
| 17 | Zwitterionic PEG-PC Hydrogels Modulate the Foreign Body Response in a Modulus-Dependent Manner. Biomacromolecules, 2018, 19, 2880-2888. | 2.6 | 74 |
| 18 | Comparative Study of Multicellular Tumor Spheroid Formation Methods and Implications for Drug Screening. ACS Biomaterials Science and Engineering, 2018, 4, 410-420. | 2.6 | 70 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | A cellâ€“ECM screening method to predict breast cancer metastasis. Integrative Biology (United) Tj ETQq1 1 0.784314 rgBT /Overlock | 0.6 | 66 |
| 20 | Thermal-Responsive Behavior of a Cell Compatible Chitosan/Pectin Hydrogel. Biomacromolecules, 2015, 16, 1837-1843. | 2.6 | 62 |
| 21 | Implantable pre-metastatic niches for the study of the microenvironmental regulation of disseminated human tumour cells. Nature Biomedical Engineering, 2018, 2, 915-929. | 11.6 | 57 |
| 22 | PEG-Phosphorylcholine Hydrogels As Tunable and Versatile Platforms for Mechanobiology. Biomacromolecules, 2013, 14, 2294-2304. | 2.6 | 54 |
| 23 | Control of Astrocyte Quiescence and Activation in a Synthetic Brain Hydrogel. Advanced Healthcare Materials, 2020, 9, e1901419. | 3.9 | 51 |
| 24 | Applicability of drug response metrics for cancer studies using biomaterials. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180226. | 1.8 | 41 |
| 25 | An omentum-inspired 3D PEG hydrogel for identifying ECM-drivers of drug resistant ovarian cancer. APL Bioengineering, 2019, 3, 026106. | 3.3 | 39 |
| 26 | A biomaterial screening approach reveals microenvironmental mechanisms of drug resistance. Integrative Biology (United Kingdom), 2017, 9, 912-924. | 0.6 | 38 |
| 27 | Bio-inspired materials for parsing matrix physicochemical control of cell migration: A Review. Integrative Biology (United Kingdom), 2012, 4, 37-52. | 0.6 | 37 |
| 28 | Autocrine-Controlled Formation and Function of Tissue-Like Aggregates by Primary Hepatocytes in Micropatterned Hydrogel Arrays. Tissue Engineering - Part A, 2011, 17, 1055-1068. | 1.6 | 35 |
| 29 | Differentiation of Pathogenic Th17 Cells Is Negatively Regulated by Let-7 MicroRNAs in a Mouse Model of Multiple Sclerosis. Frontiers in Immunology, 2019, 10, 3125. | 2.2 | 34 |
| 30 | A novel three-dimensional model to quantify metastatic melanoma invasion. Molecular Cancer Therapeutics, 2007, 6, 552-561. | 1.9 | 25 |
| 31 | Tumorâ€stroma interactions differentially alter drug sensitivity based on the origin of stromal cells. Molecular Systems Biology, 2018, 14, e8322. | 3.2 | 25 |
| 32 | The influence of ascorbic acid, TGF-Î²1, and cell-mediated remodeling on the bulk mechanical properties of 3-D PEGâ€“fibrinogen constructs. Biomaterials, 2009, 30, 3854-3864. | 5.7 | 23 |
| 33 | 2D or 3D? How cell motility measurements are conserved across dimensions in vitro and translate in vivo. Bioengineering and Translational Medicine, 2020, 5, e10148. | 3.9 | 23 |
| 34 | Integrin Î±6 and EGFR signaling converge at mechanosensitive calpain 2. Biomaterials, 2018, 178, 73-82. | 5.7 | 21 |
| 35 | Strain-stiffening gels based on latent crosslinking. Soft Matter, 2017, 13, 9007-9014. | 1.2 | 20 |
| 36 | Vascularized Biomaterials to Study Cancer Metastasis. Advanced Healthcare Materials, 2020, 9, e1901459. | 3.9 | 20 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Differential cathepsin responses to inhibitor-induced feedback: E-64 and cystatin C elevate active cathepsin S and suppress active cathepsin L in breast cancer cells. International Journal of Biochemistry and Cell Biology, 2016, 79, 199-208. | 1.2 | 19 |
| 38 | Anomalously diffusing and persistently migrating cells in 2D and 3D culture environments. APL Bioengineering, 2018, 2, 026112. | 3.3 | 18 |
| 39 | A poly(ethylene glycol) three-dimensional bone marrow hydrogel. Biomaterials, 2022, 280, 121270. | 5.7 | 18 |
| 40 | Biochemical and biomechanical drivers of cancer cell metastasis, drug response and nanomedicine. Drug Discovery Today, 2016, 21, 1489-1494. | 3.2 | 17 |
| 41 | Complementary, Semiautomated Methods for Creating Multidimensional PEG-Based Biomaterials. ACS Biomaterials Science and Engineering, 2018, 4, 707-718. | 2.6 | 16 |
| 42 | Promoting cell adhesion on slippery phosphorylcholine hydrogel surfaces. Journal of Materials Chemistry B, 2014, 2, 620-624. | 2.9 | 14 |
| 43 | Biomechanical Microenvironment Regulates Fusogenicity of Breast Cancer Cells. ACS Biomaterials Science and Engineering, 2019, 5, 3817-3827. | 2.6 | 13 |
| 44 | Seeded laser-induced cavitation for studying high-strain-rate irreversible deformation of soft materials. Soft Matter, 2020, 16, 9006-9013. | 1.2 | 13 |
| 45 | Localized characterization of brain tissue mechanical properties by needle induced cavitation rheology and volume controlled cavity expansion. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 114, 104168. | 1.5 | 12 |
| 46 | Heparin Decamer Bridges a Growth Factor and an Oligolysine by Different Charge-Driven Interactions. Biomacromolecules, 2013, 14, 4091-4098. | 2.6 | 9 |
| 47 | Smooth Muscle Stiffness Sensitivity is Driven by Soluble and Insoluble ECM Chemistry. Cellular and Molecular Bioengineering, 2015, 8, 333-348. | 1.0 | 9 |
| 48 | Emerging Concepts and Tools in Cell Mechanomemory. Annals of Biomedical Engineering, 2020, 48, 2103-2112. | 1.3 | 9 |
| 49 | OrgDyn: feature- and model-based characterization of spatial and temporal organoid dynamics. Bioinformatics, 2020, 36, 3292-3294. | 1.8 | 6 |
| 50 | Biomaterials in Mechano-oncology: Means to Tune Materials to Study Cancer. Advances in Experimental Medicine and Biology, 2018, 1092, 253-287. | 0.8 | 5 |
| 51 | Extracellular matrix stiffness protects carcinoma cells from sorafenib via JNK signaling. , 2014, , . | | 3 |
| 52 | Genetic Mutations Associated with Hormone-Positive Breast Cancer in a Small Cohort of Ethiopian Women. Annals of Biomedical Engineering, 2021, 49, 1900-1908. | 1.3 | 2 |
| 53 | Cavitation induced fracture of intact brain tissue. Biophysical Journal, 2022, 121, 2721-2729. | 0.2 | 1 |
| 54 | Integrin binding uniquely regulates tropic breast cancer cell phenotypes in vitro. , 2014, , . | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | The 2020 Young Innovators of Cellular and Molecular Bioengineering. Cellular and Molecular Bioengineering, 2020, 13, 391-392. | 1.0 | 0 |
| 56 | Materials-Driven Approaches to Understand Extrinsic Drug Resistance in Cancer. Soft Matter, 2022, , . | 1.2 | 0 |
| 57 | Systems approaches to uncovering the contribution of environment-mediated drug resistance. Current Opinion in Solid State and Materials Science, 2022, 26, 101005. | 5.6 | 0 |