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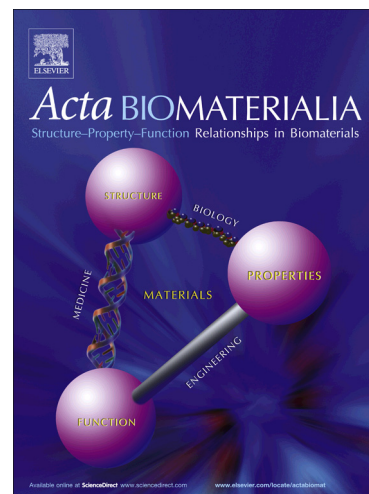
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Mediating human stem cell behaviour via defined fibrous architectures by melt electrospinning writing

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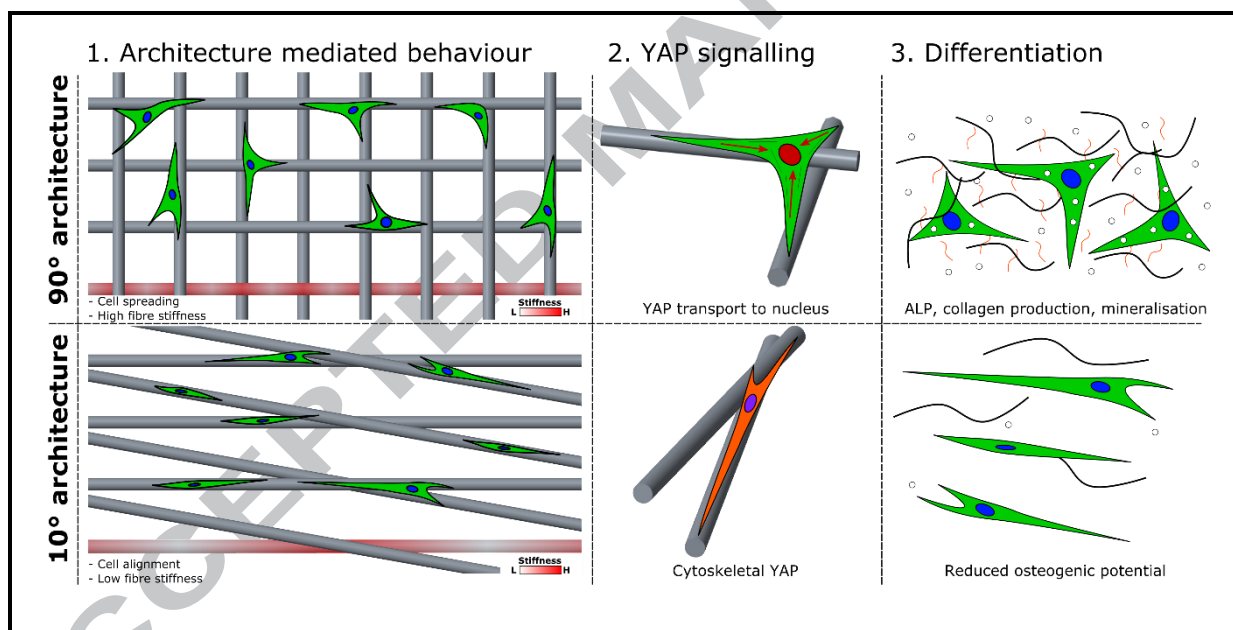
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1.1 Abstract



The architecture within which cells reside is key to mediating their specific functions within the body. In this study, we use melt electrospinning writing (MEW) to fabricate cell micro-environments with various fibrous architectures to study their effect on human stem cell behaviour. We designed, built and optimised a MEW apparatus and used it to fabricate four different platform designs of $10.4 \pm 2 \mu\text{m}$ fibre diameter, with angles between fibres on adjacent layers of 90°, 45°, 10° and R (random). Mechanical characterisation was conducted via tensile testing, and human skeletal stem cells (hSSCs) were seeded to scaffolds to study the effect of architecture on cell morphology and

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