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TITLE

Functionalization of poly(lactic acid) scaffold surface by aminolysis and hyaluronan immobilization: how it affects mesenchymal stem cell proliferation

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ABSTRACT

Natural polymers are often used to functionalize the surface of synthetic polymer scaffolds to improve their cytocompatibility for their use as biomaterial for tissue engineering. Here we used hyaluronan (HA), a glycosaminoglycan providing essential functions in human tissues, to functionalize the surface of poly(lactic acid) (PLA) films. PLA was first aminolyzed using hexane-1,6-diamine (HDA) to bring positive charges to the scaffold surface, then allowing HA immobilization by electrostatic interactions. Since HA interact specifically with various proteins, it should be considered as a bioactive species. Thus, we investigated the influence of both aminolysis and HA immobilization conditions on HA immobilization and on

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