

GENE EXPRESSION STUDY IN DENTAL PULP STEM CELLS CULTIVATED ON TITANIUM ALLOYS

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Nowadays, research on orthopedic and dental implants is focused on titanium alloys due to their appropriated mechanical properties and corrosion resistance in the body environment. Another important aspect to be investigated is their surface topography, which is very important to osseointegration. The aim of this study was to assess dental pulp stem cells response to different titanium surface topography modified. Mesenchymal stem cell marker ENG was significantly decreased in stem cells cultivated in modified titanium surface respect to machined titanium surface, indicating the differentiation effect of this biomaterial on stem cells. The obtained results can be relevant to better understand the molecular mechanism of bone regeneration and as a model for comparing other materials with similar clinical effects.

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