

Jaime A. Santillán Mercado,

Abstract

Modulation of Osteoblast Adhesion on 3D Scaffolds for Bone Tissue Regeneration

Tissue engineering leads the development of biomaterial scaffolds where its surface physicochemical properties are often achieved using different surface modification techniques. Those approaches could provide a biomimetic microenvironment that could act as a template for tissue regeneration. In this concern, an appropriate substrate with suitable sites for cell attachment plays a crucial role in cell behavior and biological functions. In this study, our strategy was to fabricate polymeric biomaterials with reproducible and predictable surface characteristics to elucidate the influence of micro and nanotopography on adhesion response, proliferation, and differentiation of human fetal osteoblastic cells (hFOB).