



Osteoblast-Like Cell Behavior on Porous Scaffolds Based on Poly(styrene) Fibers

Submitted by a.bergoend on Fri, 04/24/2015 - 14:01

Titre Osteoblast-Like Cell Behavior on Porous Scaffolds Based on Poly(styrene) Fibers
Type de publication Article de revue
Auteur Serafim, Andrada [1], Mallet, Romain [2], Pascaretti-Grizon, Florence [3], Stancu, Izabella-Cristina [4], Chappard, Daniel [5]
Editeur Hindawi Publishing Corporation
Type Article scientifique dans une revue à comité de lecture
Année 2014
Langue Anglais
Date Jan-01-2014
Numéro 41748338
Volume 2014
Titre de la revue BioMed Research International
ISSN 2314-6133

Résumé en anglais

Scaffolds of nonresorbable biomaterials can represent an interesting alternative for replacing large bone defects in some particular clinical cases with massive bone loss. Poly(styrene) microfibers were prepared by a dry spinning method. They were partially melted to provide 3D porous scaffolds. The quality of the material was assessed by Raman spectroscopy. Surface roughness was determined by atomic force microscopy and vertical interference microscopy. Saos-2 osteoblast-like cells were seeded on the surface of the fibers and left to proliferate. Cell morphology, evaluated by scanning electron microscopy, revealed that they can spread and elongate on the rough microfiber surface. Porous 3D scaffolds made of nonresorbable poly(styrene) fibers are cytocompatible biomaterials mimicking allogenic bone trabeculae and allowing the growth and development of osteoblast-like cells in vitro.

URL de la notice <http://okina.univ-angers.fr/publications/ua10320> [6]
DOI 10.1155/2014/609319 [7]
Lien vers le document <http://www.hindawi.com/journals/bmri/2014/609319/> [8]
Titre abrégé Biomed Res Int.

Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=18135](http://okina.univ-angers.fr/publications?f[author]=18135)
- [2] <http://okina.univ-angers.fr/romain.mallet/publications>
- [3] <http://okina.univ-angers.fr/f.pascaretti/publications>
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=4565](http://okina.univ-angers.fr/publications?f[author]=4565)
- [5] <http://okina.univ-angers.fr/daniel.chappard/publications>

- [6] <http://okina.univ-angers.fr/publications/ua10320>
- [7] <http://dx.doi.org/10.1155/2014/609319>
- [8] <http://www.hindawi.com/journals/bmri/2014/609319/>

Publié sur *Okina* (<http://okina.univ-angers.fr>)