

Accepted Manuscript

Title: Incorporation of biphasic calcium phosphate microparticles in injectable thermoresponsive hydrogel modulates bone cell proliferation and differentiation

Author: Jyh-Ping Chen Ming-Jin Tsai Han-Tsung Liao



PII: S0927-7765(13)00286-5
DOI: <http://dx.doi.org/doi:10.1016/j.colsurfb.2013.04.028>
Reference: COLSUB 5756

To appear in: *Colloids and Surfaces B: Biointerfaces*

Received date: 12-2-2013
Revised date: 4-4-2013
Accepted date: 23-4-2013

Please cite this article as: J.-P. Chen, M.-J. Tsai, H.-T. Liao, Incorporation of biphasic calcium phosphate microparticles in injectable thermoresponsive hydrogel modulates bone cell proliferation and differentiation, *Colloids and Surfaces B: Biointerfaces* (2013), <http://dx.doi.org/10.1016/j.colsurfb.2013.04.028>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Incorporation of biphasic calcium phosphate microparticles in
injectable thermoresponsive hydrogel modulates bone cell
proliferation and differentiation

Jyh-Ping Chen^{1*} jpchen@mail.cgu.edu.tw, **Ming-Jin Tsai**,¹ **Han-Tsung Liao**²

¹ *Department of Chemical and Materials Engineering, Chang Gung University,
Kwei-San, Taoyuan, Taiwan 333, ROC*

² *Department of Plastic and Reconstructive Surgery, Craniofacial Research
Center, Chang Gung Memorial Hospital, Chang Gung University, Kwei-San,
Taoyuan, Taiwan 333, ROC*

Tel.: +886-3-2118800; fax: +886-3-2118668

Highlights

Bone cells in hydrogel composite showed enhanced cell proliferation and osteogenic differentiation.

Subcutaneously implanted bone cells in hydrogel composite showed ectopic bone formation in nude mice.

The hydrogel composite can serve as an injectable material for osteoblast delivery in orthopaedic applications.

Download English Version:

<https://daneshyari.com/en/article/6983750>

Download Persian Version:

<https://daneshyari.com/article/6983750>

[Daneshyari.com](https://daneshyari.com)