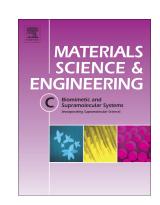
Accepted Manuscript

Prolonged release of bone morphogenetic protein-2 in vivo by gene transfection with DNA-functionalized calcium phosphate nanoparticle-loaded collagen scaffolds

Taichi Tenkumo, Juan Ramón Vanegas Sáenz, Keisuke Nakamura, Yoshinaka Shimuzu, Viktoriya Sokolova, Matthias Epple, Yuya Kamano, Hiroshi Egusa, Tsutomu Sugaya, Keiichi Sasaki



PII: S0928-4931(17)31451-0

DOI: doi:10.1016/j.msec.2018.06.047

Reference: MSC 8686

To appear in: Materials Science & Engineering C

Received date: 20 April 2017 Revised date: 13 June 2018 Accepted date: 21 June 2018

Please cite this article as: Taichi Tenkumo, Juan Ramón Vanegas Sáenz, Keisuke Nakamura, Yoshinaka Shimuzu, Viktoriya Sokolova, Matthias Epple, Yuya Kamano, Hiroshi Egusa, Tsutomu Sugaya, Keiichi Sasaki , Prolonged release of bone morphogenetic protein-2 in vivo by gene transfection with DNA-functionalized calcium phosphate nanoparticle-loaded collagen scaffolds. Msc (2018), doi:10.1016/j.msec.2018.06.047

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.

ACCEPTED MANUSCRIPT

Prolonged Release of Bone Morphogenetic Protein-2 *In Vivo* by Gene Transfection with DNA-Functionalized Calcium Phosphate Nanoparticle Loaded Collagen Scaffolds

Taichi Tenkumo,^{a*} Juan Ramón Vanegas Sáenz,^b Keisuke Nakamura,^a Yoshinaka Shimuzu,^c

Viktoriya Sokolova,^d Matthias Epple,^d Yuya Kamano,^e Hiroshi Egusa,^e Tsutomu Sugaya,^f

Keiichi Sasaki.^b

^a Laboratory for Redox Regulation, Tohoku University Graduate School of Dentistry,

4-1 Seiryo-machi, Aoba-ku, Sendai, 980-8575, Japan

^b Division of Advanced Prosthetic Dentistry, Tohoku University Graduate school of Dentistry,

4-1 Seiryo-machi, Aoba-ku, Sendai, 980-8575, Japan

^c Division of Oral Pathology, Tohoku University Graduate School of Dentistry,

4-1 Seiryo-machi, Aoba-ku, Sendai, 980-8575, Japan

^d Institute for Inorganic Chemistry and Center for Nanointegration Duisburg-Essen

(CeNIDE), University of Duisburg-Essen, Universitaetsstr. 5-7, 45117 Essen, Germany

^e Division of Molecular and Regenerative Prosthodontics, Tohoku University Graduate

School of Dentistry, 4-1 Seiryo-machi, Aoba-ku, Sendai, 980-8575, Japan

<u>Graduate School of Dental Medicine, Hokkaido University, W7 Kita-ku, Sapporo 060-8586,</u>
<u>Japan</u>

^f Department of Periodontology and Endodontology, Division of Oral Health Science,

*Correspondence to:

Taichi Tenkumo.

Download English Version:

https://daneshyari.com/en/article/7865549

Download Persian Version:

https://daneshyari.com/article/7865549

<u>Daneshyari.com</u>