## **Accepted Manuscript**

#### Full length article

Ion channel functional protein kinase TRPM7 regulates Mg ions to promote the osteoinduction of human osteoblast via PI3K pathway: *In vitro* simulation of the bone-repairing effect of Mg-based alloy implant

Xiuzhi Zhang, Haiyue Zu, Dewei Zhao, Ke Yang, Simiao Tian, Xiaoming Yu, Faqiang Lu, Baoyi Liu, Xiaobing Yu, Benjie Wang, Wei Wang, Shibo Huang, Yongxuan Wang, Zihua Wang, Zhaodong Zhang

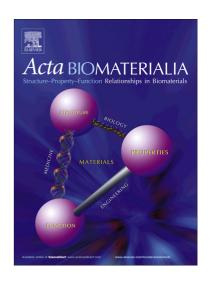
PII: S1742-7061(17)30562-7

DOI: http://dx.doi.org/10.1016/j.actbio.2017.08.051

Reference: ACTBIO 5062

To appear in: Acta Biomaterialia

Received Date: 4 May 2017 Revised Date: 31 August 2017 Accepted Date: 31 August 2017



Please cite this article as: Zhang, X., Zu, H., Zhao, D., Yang, K., Tian, S., Yu, X., Lu, F., Liu, B., Yu, X., Wang, B., Wang, W., Huang, S., Wang, Y., Wang, Z., Zhang, Z., Ion channel functional protein kinase TRPM7 regulates Mg ions to promote the osteoinduction of human osteoblast via PI3K pathway: *In vitro* simulation of the bone-repairing effect of Mg-based alloy implant, *Acta Biomaterialia* (2017), doi: http://dx.doi.org/10.1016/j.actbio. 2017.08.051

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**

Ion channel functional protein kinase TRPM7 regulates Mg ions to promote the osteoinduction of human osteoblast via PI3K pathway: *In vitro* simulation of the bone-repairing effect of Mg-based alloy implant

Xiuzhi Zhang<sup>1,2</sup>, Haiyue Zu<sup>1</sup>, Dewei Zhao<sup>1</sup>\*, Ke Yang<sup>2</sup>, Simiao Tian<sup>1</sup>, Xiaoming Yu<sup>2</sup>, Faqiang Lu<sup>1</sup>, Baoyi Liu<sup>1</sup>, Xiaobing Yu<sup>1,2</sup>, Benjie Wang<sup>1</sup>, Wei Wang<sup>1</sup>, Shibo Huang<sup>1</sup>, Yongxuan Wang<sup>1</sup>, Zihua Wang<sup>1</sup>, Zhaodong Zhang<sup>1</sup>

<sup>1</sup>Department of Orthopedics, Affiliated Zhongshan Hospital of Dalian University,
Dalian, Liaoning 116001, China

<sup>2</sup>Institute of Metal Research, Chinese Academy of Science, Shenyang 110016, China

Corresponding author: Dewei Zhao

**Address:** Department of Orthopedics, Affiliated Zhongshan Hospital of Dalian University, No. 6 Jiefang Street Dalian 116001, China

**Phone:** +86-0411-62893509

**FAX:** +86-0411-62893555

E-mail: zhaodewei2016@163.com

**Key words:** biodegradable magnesium implants, osteoinduction, TRPM7, alkaline stress, osteonecrosis of femoral head

#### Download English Version:

# https://daneshyari.com/en/article/6483239

Download Persian Version:

https://daneshyari.com/article/6483239

<u>Daneshyari.com</u>