

CORRECTION

Open Access



# Correction: The Toll-like receptor ligand, CpG oligodeoxynucleotides, regulate proliferation and osteogenic differentiation of osteoblast

Wenwen Yu<sup>1,2</sup>, Yi Zheng<sup>1</sup>, Hongyan Li<sup>1</sup>, Hongbing Lin<sup>1</sup>, Zhen Chen<sup>1</sup>, Yue Tian<sup>1</sup>, Huishan Chen<sup>1</sup>, Peipei Zhang<sup>1</sup>, Xiaowei Xu<sup>1</sup> and Yuqin Shen<sup>1\*</sup>

**Correction: Journal of Orthopaedic Surgery and Research (2020) 15:327**  
<https://doi.org/10.1186/s13018-020-01844-x>

Following publication of the original article [1], the authors identified an error in Fig. 3. The correct figure is given below.

---

The original article can be found online at <https://doi.org/10.1186/s13018-020-01844-x>.

\*Correspondence:

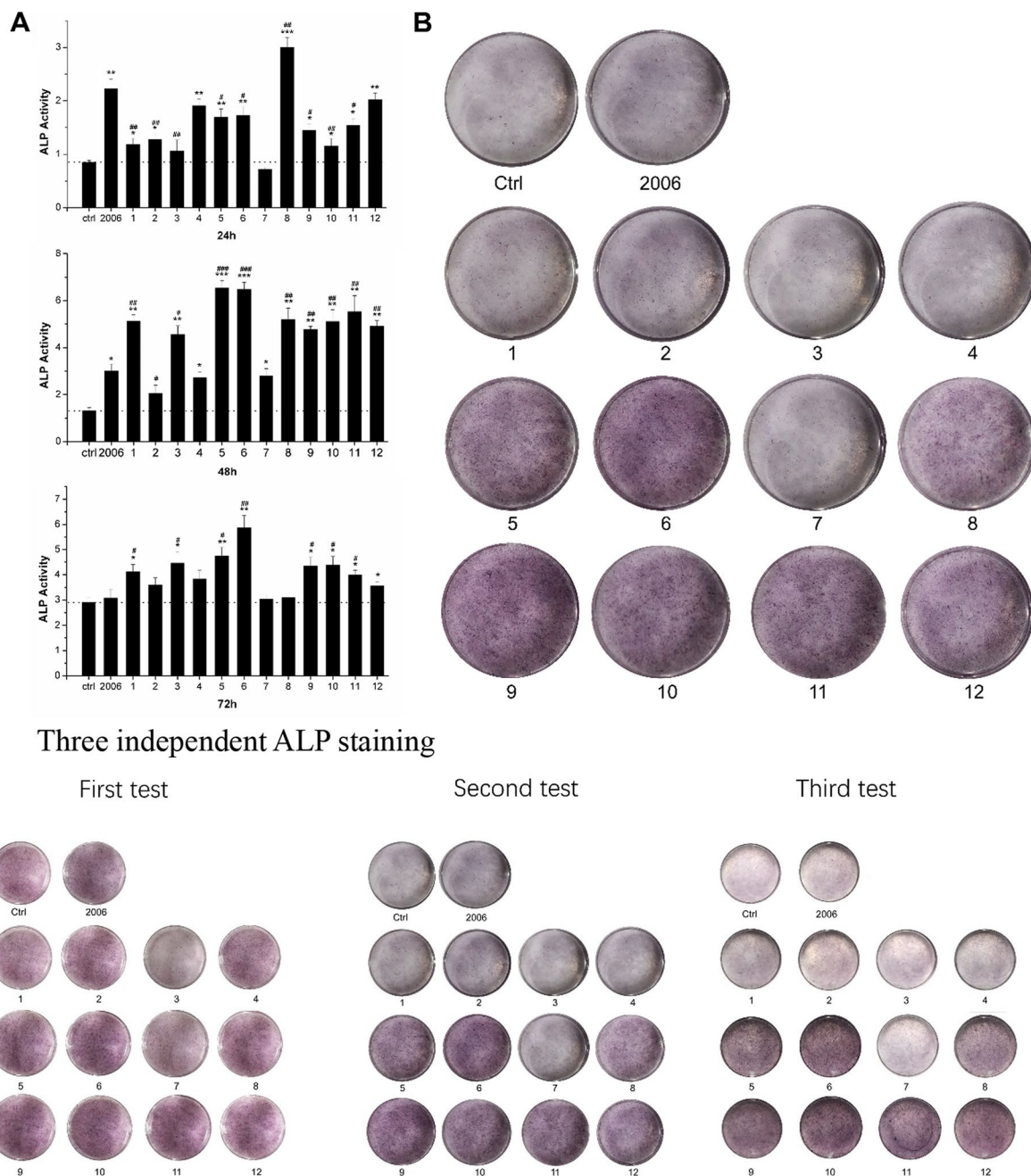
Yuqin Shen  
shenyqjlu@126.com

<sup>1</sup> Department of Periodontics, School and Hospital of Stomatology, Jilin University, 1500 Qinghua Road, Changchun 130021, Jilin, China

<sup>2</sup> Department of Orthodontics, Tianjin Key Laboratory of Oral and Maxillofacial Function Reconstruction; Tianjin Stomatological Hospital; Hospital of Stomatology, Nankai University, 75 Dagu North Road, Tianjin 300041, China



© The Author(s) 2023. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.



**Fig. 3** Effects of ODNs on osteogenic differentiation. **a** ALP activity assay and **b** ALP staining assay of MC3T3 cells treated by 12 ODNs for 24 h, 48 h, 72 h, and 7 days, respectively. 1, FC003; 2, SAT05f; 3, SAT05d; 4, MS19; 5, BW001; 6, FC001; 7, FC002; 8, BW006; 9, YW002; 10, YW001; 11, FC004; 12, MT01. n = 3. Data were expressed as mean ± SD of three independent experiments. \*P < 0.05, \*\*P < 0.01 and \*\*\*P < 0.001 compared with the control group and #P < 0.05, ##P < 0.01 and ###P < 0.001 compared with the ODN 2006 group by paired t test

Published online: 02 November 2023

**Publisher’s Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

**Reference**

Yu W, et al. The Toll-like receptor ligand, CpG oligodeoxynucleotides, regulate proliferation and osteogenic differentiation of osteoblast. *J Orthop Surg Res* 2020;15, 327. <https://doi.org/10.1186/s13018-020-01844-x>