

Dear editor:

Enclosed please find the revised manuscript No. 80685 "Diagnosis and treatment of chronic osteomyelitis based on nanomaterials ". We greatly appreciate the comments and have learned a lot from the reviewers. The critics have been addressed as following.

Reviewer Comments:

Reviewer 1:

1. What review is this, narrative or systematic, or others?

A: Thank you for your thought provoking question, we submitted this manuscript as a mini-review column.

2. What is the novelty of the current study?

A: Thank you for your thought provoking question, the current manuscript reviewed new antimicrobial options brought by development of nanotechnology with high specificity to infection sites and displayed an overview of current representative strategies and their underlying mechanisms.

3. Can nanomaterials lead to early detection?

A: Thank you for your thought provoking question, for now, most nanomaterials can only help diagnosis and treatment after infection, we hope that there will be some break through on early detection.

4. Is it effective against any initiating bacteria? For example, is it effective against osteomyelitis caused by Salmonella? Please refer to the following literature for further discussion. Salmonella Osteomyelitis of the Distal Tibia in a Healthy Woman. Acta Med Okayama. 2018 Dec;72(6):601-604. doi:

10.18926/AMO/56379. PMID: 30573916. Salmonella Osteomyelitis of the Rib Mimicking a Mammary Tumor: A Case Report. Tohoku J Exp Med. 2020 Aug;251(4):273-277. doi: 10.1620/tjem.251.273. PMID: 32727973.

A: Thank you for provide us such two marvelous articles, it is so conclusive and persuasive to quote here as reference, we add these two articles as reference 19 and 20, all modifications are marked RED.

Reviewer 2:

1. I suggest to the authors to add as many graphical images as possible for the section 2 (Nanomaterials for diagnosis and treatment of osteomyelitis, at least 4 figures for this section) to simplify the readers.

A: Thank you for your precious suggestion, we add figures in section 2, but we apologize that we can only add two figures because of the copy right permission and publication economy. All the modifications are marked RED.

2. Also, one or more tables are suggested to be listed in the section 2 to indicate what optimum conditions support the diagnosis and treatment of chronic osteomyelitis with nanomaterials.

A: Thank you for your precious suggestion, we add table in section 2 to indicate what optimum conditions support the diagnosis and treatment of chronic osteomyelitis with nanomaterials. It is much persuasive and concise after we add a table. All the modifications are marked RED.

3. The use of professional terms seems to be casual. It is recommended to clearly define and keep consistency as much as possible. Such as “chronic osteomyelitis”, “Pyogenic osteomyelitis” and “suppurative osteomyelitis”.....

A: Thank you for your precious advice, we made modifications from beginning to end of the whole manuscript and try to keep consistency as much as possible just as you recommended, all the modifications are marked

RED.

4. Though the authors provided a Non-Native Speakers of English Editing Certificate with the manuscript, a complete grammar check/proof reading are still needed to ensure that there are no grammatical errors or redundancies and improve the Chinglish expressions in many parts of the text. An example for sentences with expression problems, Recent animal experiments and clinical applications show that nanoparticles show great potential compared to existing drugs because of the size of nanoparticles that can quickly enter pathogenic microorganisms or bone cells.

A: Thank you for your precious advice, we used help of better English language editing service and made modifications from beginning to end of the whole manuscript, all the modifications are marked RED.

Revision reviewer:

a careful check on language and revision on professional comments is needed.

A: Thank you for your precious advice, we have edited the manuscript by another professional English language editing companies.

We feel that these changes are more persuasive and strongly support our statement in the manuscript. We hope the reviewers agree with our answers and the new version of this manuscript meets the standard of the prestigious **World Journal of Orthopedics**. Thank you very much for your consideration.

Sincerely yours

Author name been removed