Journal of Clinical Research in Paramedical Sciences
Volume 10 · Issue 2 · e119150

OPEN PEER REVIEW

Thin TiO_2 Nanocoating of Porous Titanium through Radio Frequency Magnetron Sputtering to Improve the Biological Response of Orthopedic Implants

Roghayeh Haghjoo, Seyed Khatiboleslam Sadrnezhaad, Nahid Hassanzadeh Nemati

SUBMITTED	REVISED	ACCEPTED	DOI
29 Aug 2021	23 Nov 2021	27 Nov 2021	10.5812/jcrps.119150

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

Contents

1 **Original submission** Referee 1, Associate Editor, Editor-in-Chief 2

2 **Revision 1** Referee 1, Associate Editor, Editor-in-Chief 3

Authors' reply to reviewers 4

Reviewer and editor comments 7

1 Original submission

3 comments · 21 Nov 2021 – 21 Nov 2021

Referee 1 Reviewer

MINOR REVISION 21 Nov 2021

1. There is no statistical analysis comparing MG-63 cells on the control, coated, and uncoated titanium surfaces.
2. A scale line has not been found in Figure 5.
3. In Figure 3, it appears that a is before, not after, because Ti and O2 are seen in b.
4. If possible, report the scratch test and strength test.

Associate Editor

MINOR REVISION 21 Nov 2021

Minor Revision

Editor-in-Chief

MINOR REVISION 21 Nov 2021

Minor Revision

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Journal Name: Journal of Clinical Research in Paramedical Sciences

Manuscript ID: 119150

Manuscript Title: Thin TiO2 Nanocoating of Porous Titanium through Radio Frequency Magnetron Sputtering to Improve the Biological Response of Orthopedic Implants

Authors: Roghayeh Haghjoo, Seyed Khatiboleslam Sadrnezhaad, Nahid Hassanzadeh Nemati

Reply to Reviewers' comments:

We want to thank the reviewers for the invaluable comments and suggestions. We have accepted all the recommendations and believe that we have answered all the questions. Please find the detailed answers and the revised manuscript in which all changes to the manuscript are visible in the highlight on Word.

We hope that the manuscript is now substantially improved and acceptable for publication in the Journal of Clinical Research in Paramedical Sciences.

Reviewer #1 comments:

1. *there is not statistical analysis between MG-63 cells on the control, coated, and uncoated titanium surfaces*

Answer: Many thanks for the meticulous comments of the respectful reviewer. statistical analysis between MG-63 cells on the control, coated, and uncoated titanium surfaces were done and are indicated as error bars in Figure 1. But the pattern of columns made them invisible. We accordingly modified the column chart design in Figure 2 and the text as follows: "The increase in cell viability of the TiO_2-coated specimen compared to the uncoated surface and control samples was significant ($p < 0.05$)." Page 7 of 9, lines 5-7. We modified the text and the figures, according to the helpful comment made.

2. *A scale line has not been found in Figure 5*

Answer: We thank the reviewer for this good suggestion. Hence, we accordingly modified the scales in Figure 5.

3. *In Figure 3, it appears that a is before not after, because Ti and O2 has been seen in b*

Answer: The authors apologize for this writing mistake. We modified the caption of the figure 3.

4. *If possible, report scratch test and strength test*

Answer: We agree with the reviewer on the necessity of the scratch test and strength test. However, in this study, we aimed to investigate the biological characteristics of TiO_2 nanocoating of titanium foam and in our future work, we are going to determine the mechanical properties of the TiO_2 nanocoating of titanium foam.

Reviewer #2 comments:

Many thanks for the meticulous comments of the respectful reviewer. We modified the text and the figures, according to the helpful comment made.

We insert reference on Page 5 of 9, line 19.

We insert references on Page 6 of 9, lines 8 and 9.

We replaced figure 5 with a better quality image and modified the sentence. We replaced the word “control” with “uncoated”. Page 6 of 9, line 28.

Many thanks for the meticulous comments of the respectful reviewer. statistical analysis between MG-63 cells on the control, coated, and uncoated titanium surfaces were done and are indicated as error bars in Figure 3. But the pattern of columns made them invisible. We accordingly modified the column chart design in Figure 4 and the text as follows: “The increase in cell viability of the TiO_2-coated specimen compared to the uncoated surface and control samples was significant ($p < 0.05$).” Page 7 of 9, lines 5-7.

We modified the text and the figures, according to the helpful comment made.

2 Revision 1

3 comments · 27 Nov 2021 – 27 Nov 2021

Referee 1 Reviewer

ACCEPT 27 Nov 2021

The suggested points have been implemented, and I agree to accept the manuscript.

Associate Editor

ACCEPT 27 Nov 2021

Accept

Editor-in-Chief

ACCEPT 27 Nov 2021

Accept