All **Reviewers** suggestions are followed and listed below:

**Reviewer A:**
 Abstract “More prominent surfaces” – it is not clear what is meant by this

- Corrected

The abstract currently lacks a concluding sentence
- A concluding sentence is added.

Introduction
L 50 What does “might be prepared with a controlled thickness” mean – thickness of what or is this an error?

- Corrected

L 53 “ and single” - single what?

- Corrected

L 62 I the layer of titanium oxide on titanium implants is not potentially toxic and this statement is therefore misleading – are the authors perhaps referring to potential toxicity of particles  in peri-implant tissue? - please check and correct as necessary.

- We referred to the toxic potential of titanium ions. Sentence is now corrected.

L 65 RoxolidTM is a trademark and should be accompanied by TM and the manufacturer’s name

- Corrected

Experimental
General comment: The methods section is very similar to previous publications by the same group and some text appears to have been cut and pasted from them with some reordering. Where possible to avoid such duplication, the details should be reduced with references to the
descriptions in previous papers, e.g.:- Materials Science and Engineering C 44 (2014) 254–261 Journal of Biomaterials Applications 2016, Vol. 30(6) 711–721

- We shortened all experimental procedures (where possible) are referred to the descriptions in previous papers.

L 131-132 – correct spelling:  referent/reference and exanimated/examined

- Corrected

L 133 – 139 – some text in this paragraph (immunoassay) is duplicated and should be removed and the text should then be consolidated to avoid repetition where procedural steps are identical

- Corrected

L 137 Define AO/EB and explain how the double labelling method can indicate the mode of cell death (autophagy, apoptosis and necrosis) with a reference to the method.

- Explanation of how AO/EB can indicate mode of cell death is given in *Morphological analysis (AO/EB double staining)*

L 146 Correct change of tense: “has been carried out” - was carried out

- Rephrased

L 148. It is not at all clear how the material extracts were obtained  - provide further details of the method: – extraction liquid; volume of material; length of extraction time

- More details are included in experimental part.

Results
It is not necessary to show the EDS spectra as all the information is contained in Table 1 and hence Figure 2 can be omitted.

- Figure 2 is omitted, as suggested.

What is the Y axis of Figure 3? It is usual to present MTT as absorbance and protein as ug/ml

- In Figure 3 caption (now Figure 2) we included description of Y axis. As in MTT and SRB assays protocols and mostly in publications using these assays, for the Y axis we used values relative to the control (Survival [%]): MTT - Barile et al., Toxicol. In Vitro 1993, 7, 111–116; SRB - Sekan et al., J. Natl. Cancer. Inst. 1990, 82, 1107–1112.

Cell Proliferation

L 252 – 259 the discussion beginning “However….reasonable” Although rough surfaces do promote cell differentiation rather than proliferation a decrease in cell numbers over time is not reasonable unless the cells were seeded at too high an initial density, in which case cell
proliferation cannot be compared, or the cells are dying. The former is possible since a decrease is seen even with Ticer and Ticer white which should not affect cell viability. A control without test materials should have been included to ensure that the cells were able to proliferate. It is however clear that the cells on the modified materials are dying more
quickly as is consistent with Fig. 5. What is the Y axis – it is usual to present cell proliferation data as cell counts?

- We thanks reviewer for suggestion. In revised manuscript we included control for comparison and presented on Y axis “cell count” in order to represent results more accurately. Now can be much more clearly seen, the cell number in control sample is increasing over the time. For osteoblast grown on Ticer and Ticer white general trend over time is similar, thus no significant difference of the cell number.

Conclusion
In the conclusion “the medium in which such materials are preserved” is mentioned for the first time – this “medium” must be introduced at the beginning – do you mean the extracts obtained by soaking the materials? Can you offer any explanation for the toxic effects?

- We corrected “medium” to “solution (Ca(H2PO4)2, pH 3.5)” which was used for preparation of **M1** and **M2** surfaces. Toxicity of the **M1** and **M2** surfaces is triggered by induction of apoptosis and secondary necrosis and now is mentioned in Conclusions.

In my opinion, this manuscript should: be published after major revision and additional review

If manuscript is suitable for publishing, referees recommendation: Short communication

- As suggested, we submitted manuscript now as short communication.

**Reviewer B:**
The paper is well written.
Results and discussion represent contributions to science of biomaterials
In my opinion, this manuscript should be published as is
If manuscript is suitable for publishing, referees recommendation: Original scientific paper

We thank **Reviewers** for comments and constructive suggestions.