This very interesting translational research study examined the tissue reaction of bovine osteoblasts on titanium and zirconia implant surfaces commonly used in dentistry.

Zirconia and titanium implants are widely used as materials for prosthetic devices; however there is very little data on early healing response on the tissue-implant interface. This innovative study determined surface characteristics using scanning electron microscopy and examined bovine osteoblastic response on bone-protein level. Methods are appropriate and well described in this manuscript.

Major Compulsory Revisions:
The authors discuss distinct effects of zirconia and titanium surfaces on osteoblasts in culture. However the authors do not address in great detail why, in their conclusion paragraph, zirconium oxide is a suitable material for dental implants.

Furthermore it would be interesting if the authors would discuss the results of this translational research study in regards to future studies. What further studies are needed to elaborate these relevant results?

It would be also interesting if the authors could include and comment on the recent and relevant publication: The zirconia implant-bone interface: a preliminary histologic evaluation in rabbits, by Hoffmann et al. 2008 Ju-Aug;23(4):691-5 Int J Oral Maxillofac Implant.

Minor Essential Revisions
1. Introduction: Despite titanium has a superior…., suggest: Despite the fact, that titanium has a superior…

2. Spelling
Primary osteoblastic cell culture:
Performened suggest performed

3. cell detachment: results revealed that at every time of assessment less cell---suggest fewer cells

4. Primary osteoblast cell culture
Extraction and cultivation was performed---suggest were performed

5. Biochemical analysis
Significant differences could not be found in regards to? –please explain

6. Discussion: In contrast Fillies et al reported on increased synthesis---suggest reported an increased

7. Discussion: stablised---suggest stabilized

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.