**Reviewer's report**

**Title:** Odontoblast-like differentiation and mineral formation of pulpsphere derived cells on human root canal dentin in vitro

**Version:** 0  **Date:** 26 Sep 2017

**Reviewer:** Kent Urban

**Reviewer's report:**

This manuscript describes the analysis of odontoblast-like differentiation and mineral formation of pulpsphere derived cells on human root canal dentin in vitro. The focus lies on the effect to induce a physiological obliteration in teeth with the need of a root canal filling after an endodontic treatment. Hereby, root canals are physiologically obliterated via cell-sphere induced biomineral formation in order to obtain a "physiological root canal-filling" inspired by the physiological age-related obliteration.

This manuscript is very well-structured, concise and of good writing quality. Therefore I think the manuscript can be published in Head and Face and would like to indicate the following points:

1. In Line 119 Methods: The authors use sodium chlorid 0.9% as an irrigant, is this correct or they meant sodium hypochloride?
2. Where do the DPC cells come from? (extracted teeth)?
3. Why 100,000 cells are used for spheroid formation?

**Level of interest**

Please indicate how interesting you found the manuscript:

An article of importance in its field
Declaration of competing interests

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