Reviewer's report

Title: Development of an in vitro periodontal biofilm model for assessing antimicrobial and host modulatory effects of bioactive molecules

Version: 2 Date: 19 May 2014

Reviewer: Ryoma Nakao

Reviewer's report:

- Major Compulsory Revisions

1. lane 263.
   It is hard to assert that S. mitis is dominant from the SEM data.

2. Fig. 4.
   Control data seem to be dually used in Fig. 4.
   Combine data of Fig. 4A and 4D.
   Combine data of Fig. 4B and 4E.
   Combine data of Fig. 4C and 4F.

3. Some figures and the legends.
   The captions in some figures should be written more reader-friendly. It is difficult to understand some figures mean at a glance. For example, in Fig. 4B, the treatment labels “Biofilms”, “CHX”, and “Media” on the X-axis should be replaced by “Untreated biofilms”, CHX-treated biofilms, and “Vehicle control”, respectively.

4. Discussion section.
   Characterization of biofilm molecules responsible for the regulation of IL-8 expression is ideally desired. Otherwise, at least discuss about the relationships between IL-8 expression and specific oral bacteria or the components, with referring representative reports that described about them. Many readers might be interested in the possible mechanisms in which what is responsible for the regulation of IL-8.

5. l. 56 and l. 421.
   IL-8 expression was only examined in this study. Are other chemokines/cytokines or signaling pathway molecules enhanced by the biofilms formed in the models. Authors conclude that it did appear to suppress epithelial cells from releasing inflammatory mediators. The arguments must be strengthened by additional analysis about other candidate molecules as well.

6. Fig. 2B, 2C, 3E-J
   Show the scale for each fig.
7. Fig. 3E, 3H, and 3J. Replace these figs with still higher magnification photos.

- Minor Essential Revisions

1. Typo at l. 56 surppress

**Level of interest:** An article of limited interest

**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