Reviewer’s report

Title: Efficacy of citric acid-based denture cleanser on Candida albicans biofilm formed on poly(methyl methacrylate): effects on residual biofilm and recolonization process

Version: 2 Date: 29 April 2014

Reviewer: Gordon Ramage

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Major point:

Line 288 – not clear what point the authors are making with respect to efflux pumps. Are they suggesting the cells take up the denture cleanser and expand. Is the hypothesis that efflux pumps are not functioning and therefore swell. In the presence of fluconazole C. albicans is know to pump out azole drug, rather than accumulate it. I am not convinced that the data supports this as the SEM and confocal show different things. I would suggest toning down any mechanistic assumptions and focus on the descriptive aspects of the paper, which are clearly demonstrated.

Minor points:

Please provide further information of what exactly citric acid based denture cleansers are, their mode of action and frequency of use commercially. This is found in the discussion, but needs to be up front to help show relevance.

Why were dilutions of this used rather than concentrated solution of citric acid denture cleanser? It appears arbitrary rather than rational, so it needs some description to make a robust case for study design.

Table 1 – do you need this level of detail? Presumably this could act as supplementary data and you could add the statistical significance levels into the narrative.

Table 2/3 – what is TR and RE? Need to define acronym in table. The upper and lower case letters are not clear with respect the analyses represent. I have never seen statistics presented this way. Please simplify if possible.

SEM images – the cells in the control look damages based on the ruffled membranes (panel A). Please comment.

The legend discusses hyphae though few if any are visible. Please make clearer with arrows where these are.

Figure 2 – the images are not the same magnification for panels A/C compared to B. These are clearly at a higher magnification – please provide image of equal magnification. The SEM images show same sized cells whereas confocal
different sizes. There are no clear morphological alterations as stated. There are however differences in density. Rewrite the legend to take account of this.

There is no clear evidence of viability reduction based on the images as these are similarly green fluorescent. Please discuss or tone down this element in the manuscript.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

No competing interests