Reviewer’s report

Title: REGULATION OF SOMATOSTATIN RECEPTOR 2 BY PROINFLAMMATORY, MICROBIAL AND OBESITY-RELATED SIGNALS IN PERIODONTAL CELLS AND TISSUES

Version: 0 Date: 28 Aug 2018

Reviewer: Marianne S Elston

Reviewer's report:

In this study the authors describe increased SSTR2 mRNA and protein expression in diseased human gingiva compared to healthy patients, and increased SSTR2 mRNA and protein expression in cultured fibroblasts in response to IL-1beta, F. nucleatum, as well as the adipokines, leptin and visfatin. This was followed by a rat study also confirming SSTR2 increases in response to periodontitis (ligature induced), diet-induced obesity compared to control animals. The paper is well-written and the experimental protocol appears appropriate and the results consistent across the different experiments performed.

Minor comments

I note the age of the periodontally-diseased patients was quite different from the healthy donors but presume it was not possible to obtain tissue from a more closely matched group to the healthy donors.

From this work it doesn't appear that the increase in SSTR2 expression is just due to an increase in inflammatory cells in the diseased tissue. It would be interesting as the logical next step to see whether blocking and stimulating SSTR2 alters the disease process but this is outside the scope of this paper. Similarly assessment of the roles of the other 4 SSTRs.

Level of interest
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An article of importance in its field

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