Reviewer’s report

**Title:** The role of MMP-12 gene polymorphism -82 A-to-G (rs2276109) in immunopathology of COPD in Polish patients: a case control study

**Version:** 1  **Date:** 15 Nov 2018

**Reviewer:** Robert Trumbly

**Reviewer's report:**

The authors studied groups of COPD patients and controls, with respect to a specific polymorphism in the promoter region of the MMP-12 gene. They found differences in the % of the different alleles in the COPD and normal subjects. The COPD subjects had higher levels of MMP-12 protein expression. However, they could not demonstrate an effect of the MMP-12 polymorphism on MMP-12 protein activity.

There are some important limitations to the study that the authors discuss at the end of the results section. A major limitation is that they measured MMP-12 levels in serum, not in the lungs.

One problem with their conclusion is that they state that the -82G allele protects against COPD. I think this is an over-interpretation, since they didn't find an effect of this allele on MMP-12 activity. They should stick to the observation that there were differences in allele frequencies between COPD and normal subjects, without concluding a causal relationship.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
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