Reviewer’s report

Title: Increased expression of lung TRPV1/TRPA1 in a cough model of bleomycin-induced pulmonary fibrosis in guinea pigs

Version: 2 Date: 30 Nov 2018

Reviewer: Mariana Brozmanova

Reviewer's report:

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In the revised version the authors made efforts and corrected an original version of manuscript according to reviewer's comment and suggestions. The overall quality of this revised manuscript became undoubtedly much better. Despite this and because this is a research article I have still reservations about designing and evaluating cough reflex therefore I leave the final decision about this part of manuscript to the editor.

Concern:
1) I don't agree with the author's argument that „In the most published studies...there are no precise descriptions...of bleomycin administration...The research article requires precise description of animal modelling a so on.
2) Page 19, line 37 the reference requires a revision - „Laude EA, Higgins KS, Morice AH..."
3) Fig 1B - correct asterisks to show significant differences, equally in Fig 2B on some places

Comment:
I recommend expanding the author's scientific knowledge of neural cough regulation and I suggest reading a review paper titled "Mazzone SB, Undem BJ. Vagal Afferent Innervation of the Airways in Health and Disease. Physiol Rev 2016; 96 (3): 975-1024" which is very helpful in cough study field.

In recent years, the neural pathways that are involved in cough have been investigated. The cough reflex is directly initiated by activation of the two vagal afferent nerve subtypes. Extrapulmonary jugular airway C-fibres with nociceptive characteristics mediate mainly chemically-induced cough and mechanosensitive nodose Aδ-fibres innervating the trachea (cough receptors - responsive mainly for protective cough) mediate primarily mechanically-induced cough.

On the other hand, to obtain the convincing data from cough study, there is essential to upgrade the method for objectification and validation, it means data must be documented and the best way is using pneumotachograph airway changes corresponding with sound records. Finally, the authors can use these data for off line analysis.
From ethical point of view before starting experiment the authors should carefully consider methodical approaches including concentration of tussigen and rather keep "potency and efficacy".

Finally, it is generally known, that guinea pigs are characterized by a wide variety in respiratory response including cough reflex. During cough challenge by irritants there is observed except real cough reflex other expiratory efforts or cough-like artefacts with efforts to get rid of irritants.

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

Unable to assess

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

No

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

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**  
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

**Quality of written English**  
Please indicate the quality of language in the manuscript:

Acceptable

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