**Reviewer’s report**

**Title:** Increased expression of neuregulin 1 in the urothelium of rat bladder with partial bladder outlet obstruction

**Version:** 0  **Date:** 06 Sep 2017

**Reviewer:** R. Lombardo

**Reviewer's report:**

The present study evaluates the expression of neuregulin in the urothelium of rat bladder with partial outlet obstruction.

Title: Summarizes the findings of the study however it would be more appropriate to talk about 'rat model of OAB'

Abstract: Well described however all along the abstract the authors talk about bladder outlet obstruction and in the conclusions the authors introduce the concept of detrusor overactivity. Why?

Introduction: The introduction is confusing it is not clear if the authors want to prove NRG-1 has an increased expression in a model of OAB or in a BOO model.

Methods: Well described reproducible. Please add Melman et al J Urol 2005 reference to better characterise the partial bladder obstruction model.

Results: Well described, figures as well.

Discussion: Please comment and compare results with the following study on the same topic: Changes of neuregulin-1 (NRG-1) expression in a rat model of overactive bladder induced by partial urethral obstruction: is NRG-1 a new biomarker of overactive bladder?

Jang H, Han DS, Yuk SM. BMC Urol. 2013 Oct 23;13:54. What clinical implications do the authors think this may have.

Please add in the limitations section the lack of cistometrogram

Conclusions: Once again we mention OAB instead of BOO.

Summary: The methodology of the article is good and results are significant. The authors given the study available in the literature should orient the paper in the sense of OAB and not in the sense of BOO. As the rat model with OAB is represented by a partial bladder obstruction the authors should just change the title and better delucidate the concept in the introduction and discussion. This study adds evidence to the role of NRG-1 in OAB and confirms the findings of Yang et al.
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

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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None

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