

OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-19-00172

Title: Microglial cathepsin B as a key driver of inflammatory brain diseases and brain aging

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Reviewer's country: Italy

Date sent for review: 2019-04-01

Date reviewed: 2019-04-19

Review time: 18 days

COMMENTS TO AUTHORS

This is an interesting and well written review article on the role of microglial cathepsin in neuroinflammation and brain aging.

Overall, the article explores in a complete and balanced way the current state of the art in this field.

To further improve the manuscript I suggest the following changes:

- 1) The introduction does not provide references to inform the reader on the general framework of neuroinflammation in neurodegenerative disease. To this respect, Authors should cite: Cappellano G, et al. Immunity and inflammation in neurodegenerative diseases. *Am J Neurodegener Dis.* 2013;2:89-107.
- 2) By showing that microglia are involved in both tissue damage and A-beta clearance, authors imply that the role of this complex cellular network can play both detrimental and protective functions in neurodegenerative disease. They should comment on this apparent inconsistency, also citing relevant literature to this regard (e.g. Comi C, Tondo G. Insights into the protective role of immunity in neurodegenerative disease. *Neural Regen Res.* 2017 Jan;12(1):64-65.)