

OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-23-00779

Title: Astrocytes dynamically regulate the BBB in the healthy brain

Reviewer's Name: Takafumi Inoue

Reviewer's country: Japan

COMMENTS TO AUTHORS

This brief review article summarizes the overview of BBB, then describes about roles of secreted molecules, namely Wnt/beta-catenin, netrins, and bFGF, from astrocytes in pathological conditions, and concludes that, in contrast to the pathological conditions, knowledge about the roles of astrocytes on the integrity of the BBB under physiological conditions is lacking. Overall, this manuscript concisely summarizes the astrocyte role in the BBB. I have some comments as below:

Line 38, page 3 (the cover page is counted as page 1): It is important to show references reporting "paracrine factors affecting the BBB in vitro are NOT expressed or expressed at a low level under physiological conditions", because this is the key issue of this article.

Line 18, page 4: Yao et al. did not show BEC-barrier properties by the in vitro experiments, but BEC proliferation and migration properties.

Line 45, page3: "..., and nitric oxide is increased" should be "..., and nitric oxide are increased".