

OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-23-00939

Title: Amyloid beta and tau protein beyond Alzheimer's disease

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Reviewer's country: USA

COMMENTS TO AUTHORS

General idea that Amyloid beta and tau protein are present in many neurodegenerative diseases is strong and well documented, but there is lack of explanation why it happens.

The reviewed manuscript named "Amyloid beta and tau protein beyond Alzheimer's disease" is aimed to overview the connections between A β and tau proteins and a spectrum of neuropathologies. Authors have indicated the presence of these factors in many neurodegenerative diseases (ND) and have shown that molecular mechanisms underlying their aggregation and pathogenesis may have some similarities. Definitely, there is a need for a concerted effort to evaluate the utility of these proteins as diagnostic, predictive, prognostic, and therapeutic molecular biomarkers not only in AD but also in other disorders. This review includes many important disorders and is written in understandable English.

Unfortunately, the manuscript looks more like a compendium of data, without links and discussions which are usually welcome in this type of review. While this reviewer also believes that both Amyloid beta and tau protein are the hallmarks of practically all neurodegenerative diseases, it would be interesting to hear the authors' opinions on why they are. This reviewer suggests to the authors add at least some of their opinions on why Amyloid beta and tau protein are involved in ND in the Discussion, or add some opinions elsewhere.

Also, authors may add some phrases about the limiting effect of amyloid-beta and tau protein on neural regeneration.