

## PEER-REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research

**Manuscript NO:** NRR-D-18-00385

**Title:** Nose-to-brain drug delivery approach: a key to easily access the brain for the treatment of the Alzheimer's disease

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**Reviewer's country:** Italy

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### COMMENTS TO AUTHORS

Authors stated that the intranasal (IN) route offers an alternative approach for drug delivery to the brain and represents an easier access for the treatment of Alzheimer's disease (AD). The drugs follow intracellular and extracellular transport mechanism to enter into the different regions of the brain via olfactory and trigeminal sensory neurons, but the exact mechanism of drug transport from the nasal cavity to the brain is still discussed. This delivery device is able to directly target the drug to the olfactory region of the nasal cavity which further facilitates the absorption of the drug through neuronal channels; this feature can make the drug bioavailability in the brain more uniform and reproducible (use of various additives, nature of the drug, formulation parameters, experimental conditions) than the current strategies.

A considerable research database promises the potency of the IN approach in the treatment of AD and other brain disorders. The IN route is, therefore, a direct, potential and convenient approach to treat the brain disorders with proper clinical investigations.

My comments:

\* References are updated but little; an overview of ongoing clinical studies could make the manuscript more complete.

\* Other studies on different drugs (e.g. melanocortins peptides) are under intensive investigation for AD. These researches should be quoted to improve the manuscript.