

PEER-REVIEW REPORT

Name of journal: Neural Regeneration Research

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Title: Memory consolidation during sleep and adult hippocampal neurogenesis

Reviewer's Name: Jia-Xu Chen

Reviewer's country: China

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COMMENTS TO AUTHORS

The manuscript by the author aims to review the "Memory consolidation during sleep and adult hippocampal neurogenesis". Firstly, the authors described the essential information about the "dentate gyrus (DG) circuitry and development" and the role of DG neurons in mnemonic function. Subsequently, the authors elucidated the interaction between sleep and memory consolidation. Finally, the potential related links between sleep deprivation and adult DG neurons were further reviewed. In the conclusion section, the authors proposed several future directions, and point out the potential application values of adult-generated DG neurons, hippocampal NSPCs in neurodegenerative disease.

1. Several reviews have been published recently in 5 years [*e.g.*, doi: 10.1016/B978-0-12-416022-4.00007-X.; doi: 10.1515/revneuro-2014-0071....], and these published reviews have summarized the DG circuitry and development in detail. Compared with these published reviews, the present manuscript is lack of integrity and novelty.
2. Please use the Graphic Abstract to visualize the underlying mechanisms of DG neurons affecting the processes of memory consolidation during sleep.
3. Dose DG neurons regulate sleep system?