

OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-20-00214

Title: Multi-omics insights into neuronal regeneration and re-innervation

Reviewer's Name: Guoqing Guo

Reviewer's country: China

Date sent for review: 2020-3-27

COMMENTS TO AUTHORS

Neural regeneration after injury depends not only on the neuron itself, but also on the microenvironment surrounding the neurons. The reason why the regeneration and repair of the central nerve is not ideal is unclear. It maybe the complicated microenvironment of the central neuron, and we do not know much about it. The author uses multi-omics to separate the neuron itself and surrounding tissues, and tries to analyze the factors of the neuron itself and the surrounding environment. The new findings is of great significance for analyzing the repair after injury. The author reviewed findings in his laboratory from the microenvironment of neurons, the powerful approach, and the obtained results, which shed new light on the research in the field of neural regeneration. The short review is very interesting.

My concerns are:

1. According the supplied method, only the axons of the ganglion cells can be obtained, because only the axons of the ganglion cells is in the optic nerves. And what is the "tweezer" approach? Should you give us a figure to show it?
2. Could you compare the difference between results by this method and traditional approach to show us their advantages. Could you simply explain Lynx1 in the context? Such as its biological characteristics and its function on neurons and their plasticity.

OPEN PEER REVIEW REPORT 2

Name of journal: Neural Regeneration Research

Manuscript NO: NRR-D-20-00214

Title: Multi-omics insights into neuronal regeneration and re-innervation

Reviewer's Name: Hongen Wei

Reviewer's country: China

Date sent for review: 2020-3-27

COMMENTS TO AUTHORS

The manuscript provides an idea of multi-omics analyses between clean fractionation of cells and the rest of the tissue environment in P0-P5 and P5-P60. The approach will aid in regeneration and re-innervation in adults.