

OPEN PEER REVIEW REPORT 2

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Title: Differential Neuronal Reprogramming Induced by NeuroD1 from Astrocytes in Grey Matter versus White Matter

Reviewer's Name: Min Jiang

Reviewer's country: China

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COMMENTS TO AUTHORS

NeuroD1 is known as the key element triggering the glia-to-neuron conversion in the CNS. In this study, the authors examined its reprogramming efficiency of astrocytes in grey matter and white matter. These experiments demonstrate that astrocytes in the white matter are more difficult to be reprogrammed than those in the grey matter. The experiments are well performed and the data are convincing. I have two minor comments to make:

1. In the last part of discussion, the authors tried to explain the reason why astrocytes in the white matter are difficult to be reprogrammed. This paragraph should be reorganized. Page 15 line 16, the sentence is very confusing and probably it is not necessary to focus on the "positive" interpretation.
2. Have the authors tested the conversion rate in acute dissociated astrocytes of corpus callosum? Theoretically, it would achieve higher conversion efficiency in vitro.