

Supporting Information

Comparison of Regenerative Effects of Transplanting Three-dimensional Longitudinal Scaffold Loaded- Human Mesenchymal Stem Cells and Human Neural Stem Cells on Spinal Cord Completely Transected Rats

*Yunlong Zou,^a Yannan Zhao,^{b,c} Zhifeng Xiao,^b Bing Chen,^b Dezun Ma,^b He Shen,^{*b,c}
Rui Gu,^{*a} and Jianwu Dai^{*b,c}*

^a China-Japan Union Hospital of Jilin University, 126 Xiantai Street, Changchun 130033, China

^b State Key Laboratory of Molecular Developmental Biology, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 3 Nanyitiao, Zhongguancun, Beijing 100101, China

^c Key Laboratory for Nano-Bio Interface Research, Division of Nanobiomedicine, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, Suzhou 215123, China

Corresponding authors

Emails: jwdai@genetics.ac.cn (Jianwu Dai); cggurui@hotmail.com (Rui Gu); hshen2009@sinano.ac.cn (He Shen)

Number of Pages: S1-S5

Number of Figures: S1-S4

Number of Tables: None

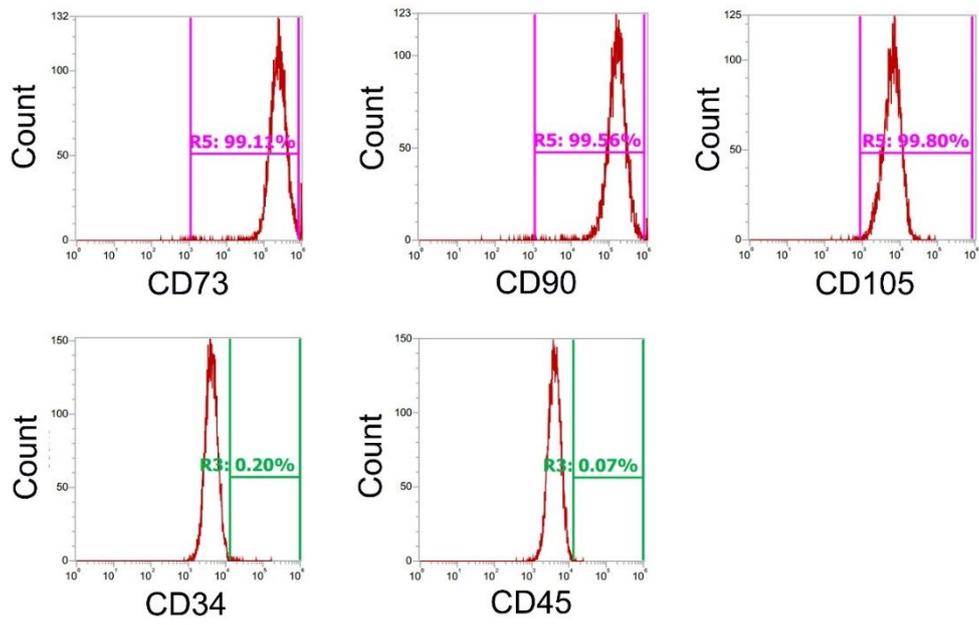


Figure S1. Characterization of hMSCs (passage 5) by flow cytometry.

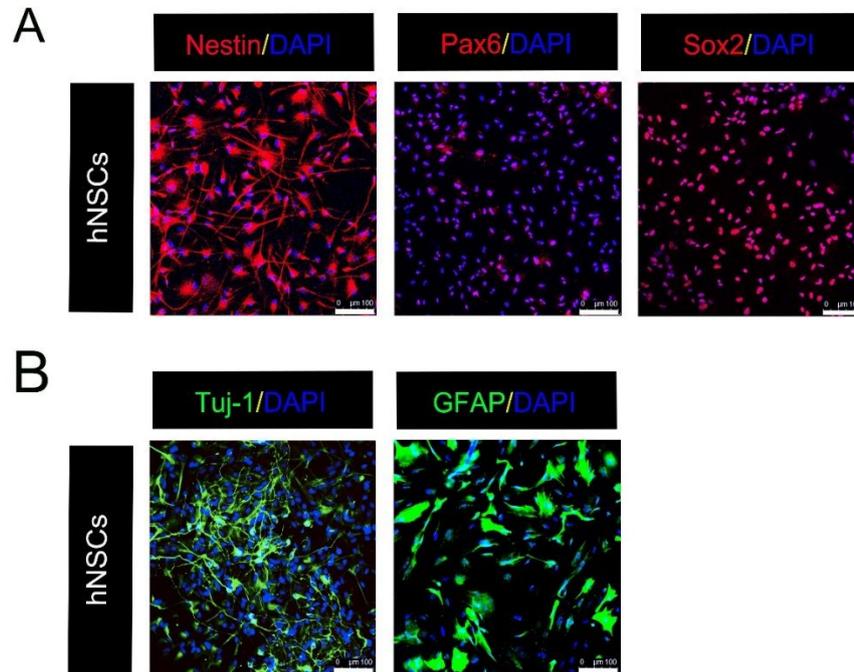


Figure S2. Characterization of hNSCs (passage 5). Immunofluorescence images of Nestin, Pax6 and Sox2-positive hNSCs (A) and *in vitro* differentiation of neurons (Tuj1) and astrocytes (GFAP) (B). Scale bar: 50 μm.

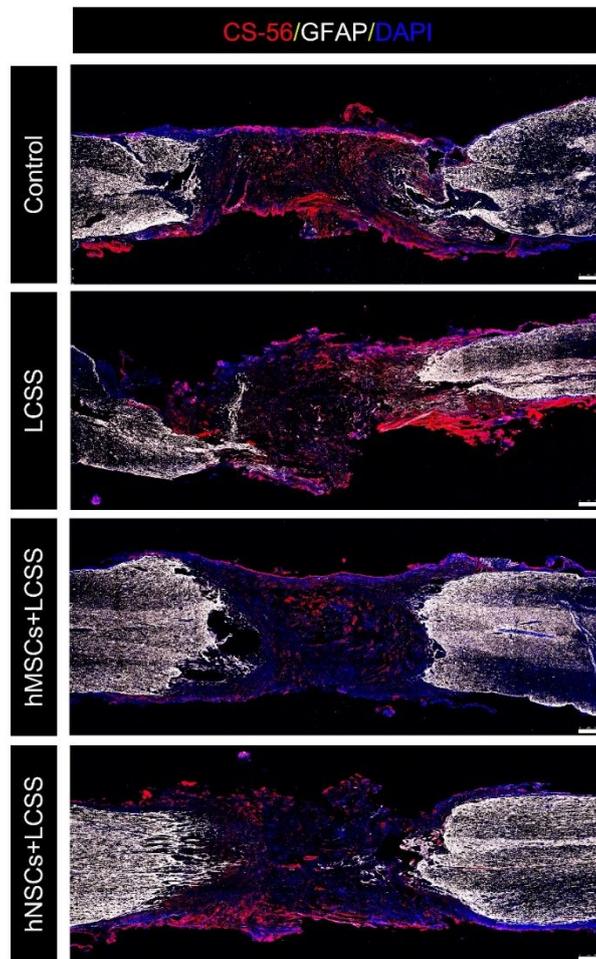


Figure S3. Implantation of hMSCs or hNSCs seeded on LCSSs reduces glial scar formation. Images of CS-56/GFAP immunostaining representing the formation of glial scars in the injury cavity at 4 weeks post-operation. Scale bars: 250 μ m.

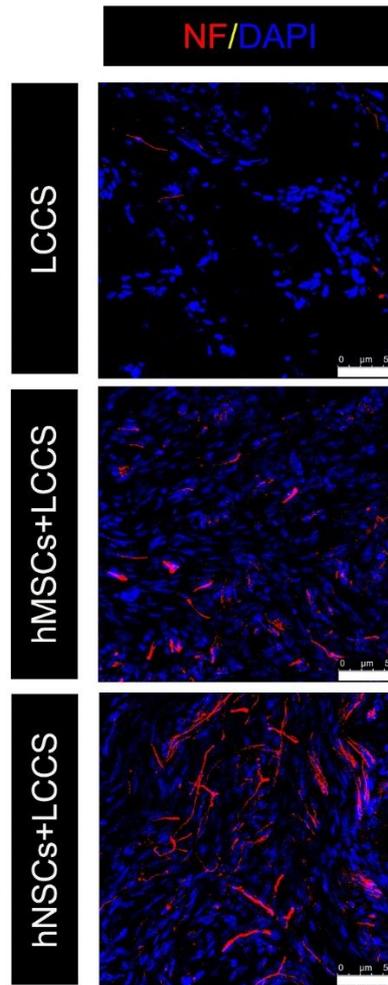


Figure S4. Neural regeneration in lesion sites at 4 weeks post-injury. Images of NF/DAPI immunostaining representing the neural regeneration in the injury area at 4 weeks post-operation. Scale bars: 50 µm.