

# Neural Regeneration Through Reprogramming In Vivo

## May 28

Tuesday, 12:30 pm

Weekly Colloquium

Billings Building  
Rosedale Conference Room



**Speaker: Chun-Li Zhang, Ph.D.**

Professor, W. W. Caruth, Jr. Scholar in Biomedical Research  
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**Host: Jian Zhong, Ph.D.**

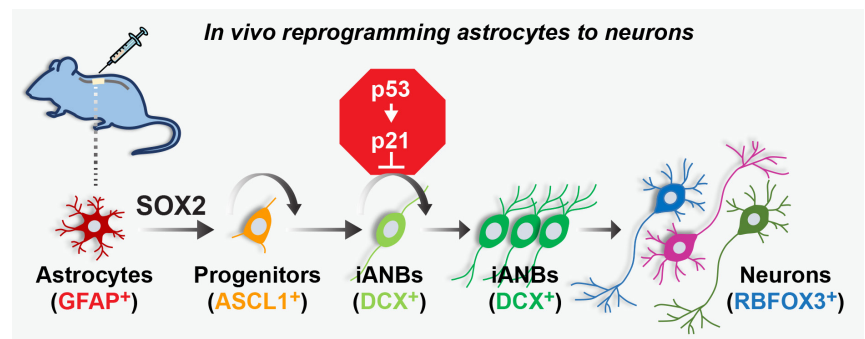
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## Abstract

A long term goal of our research is to develop innovative strategies to understand and identify therapeutics for neural injuries and degenerative diseases. Our laboratory pioneered cell fate programming in the adult rodent brain and spinal cord. We showed that reactive glial cells can be in vivo reprogrammed into neural progenitors and functionally mature neurons. Furthermore, the identity of endogenous mature neurons can also be reprogrammed. These results provide new perspectives on cell identity maintenance and potential therapeutics.



1. Phenotypic Reprogramming of Striatal Neurons into Dopaminergic Neuron-like Cells in the Adult Mouse Brain. Niu W, Zang T, Wang LL, Zou Y, Zhang CL. Stem Cell Reports. 2018 Nov 13;11(5):1156-1170. doi: 10.1016/j.stemcr.2018.09.004. Epub 2018 Oct 11. PMID: 30318292
2. The p53 Pathway Controls SOX2-Mediated Reprogramming in the Adult Mouse Spinal Cord. Wang LL, Su Z, Tai W, Zou Y, Xu XM, Zhang CL. Cell Rep. 2016 Oct 11;17(3):891-903. doi: 10.1016/j.celrep.2016.09.038. PMID: 27732862
3. In vivo reprogramming of astrocytes to neuroblasts in the adult brain. Niu W, Zang T, Zou Y, Fang S, Smith DK, Bachoo R, Zhang CL. Nat Cell Biol. 2013 Oct;15(10):1164-75. doi: 10.1038/ncb2843. Epub 2013 Sep 22. PMID: 24056302

