Curriculum Vitae-YINGJUN LIU

PERSONAL INFORMATION

Name	Yingjun Liu
Gender	Male
Date of Birth	Nov, 1986
Citizenship	China
Marital status	Married, one daughter

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EDUCATION AND RESEARCH

Nov., 2015-present
Post-doctoral researcher
Institute of Neuropathology, University Hospital Zurich (Zurich, Switzerland)

Sep., 2009-Jul., 2015
Ph.D. in Neurobiology
Institute of Neuroscience, Chinese Academy of Sciences (Shanghai, China)

Sep., 2005-Jun., 2009
B.Sc. in Bioengineering
South-Central University for Nationalities (Wuhan, China)

RESEARCH DISCRIPTIONS

Sep., 2009-Jul., 2015
Mentor: Dr. Jiawei Zhou

Research focus A: **Role of NG2 glia in the regulation of neuroinflammation.** NG2 glia is traditionally deemed as oligodendrocyte progenitors in the developing brain, however, the role of NG2 glia in the adult CNS are still elusive. Through a combination of molecular, cellular and mouse genetic methods, **we elucidated that NG2 glia was an endogenous immunosuppressor, which tightly controlled microglia activation and neuroinflammatory responses by regulating neuronal expression of CX3CL1 (fractalkine), and played vital roles in the pathogenesis of Parkinson's disease (PD).** Our results will have significant impacts on neuroimmunology and NG2 glia biology , and may inspire novel therapeutical interventions for neurodegenerative disorders.

Research focus B: **Role of NG2 glia-expressed dopamine D2 receptor (Drd2) in the pathogenesis of PD.** Our previous study showed that astrocytic Drd2 was crucial for the regulation of astrocyte-mediated neuroinflamamtion and was implicated in the progression of PD. In this study, we evaluated the functional relevance of Drd2 expressed in NG2 glia and PD in NG2 glia-specific Drd2 cKO mice. **We found that cKO of Drd2 in NG2 glia was protective for DA neurons, which was mediated by the upregulation of TGFβ2.**

Research focus C: **Quantitative proteomic analysis of the substantia nigra of PD.** To identify new candidate proteins which may play key roles in the progression of human PD. **We quantitatively compared the proteomes of the substantia nigra of normal subjects and PD patients through culture-derived isotope tags (CDITs) method,** and found an array of dysregulated proteins in PD. One of these proteins was alphaB-crystallin, which had been implicated in many neurodegenerative diseases. **We biochemically and histochemically verified the upregulation of alphaB-crystallin in PD brain and carried out functional studies in cellular models.**

Nov., 2015-Present
Mentor: Prof. Adriano Aguzzi

Research focuses: (a) Role of glial cells in the pathogenesis of prion diseases (PrDs) (b) Molecular mechanisms of protein aggregate propagation in PrDs (c) Neural connectome changes in PrDs characterized by whole-brain clearing and imaging

SELECTED PUBLICATIONS

1. **Liu, Y.**, Wang, Q., Gu, H., Shao, W., Zhang, S., Yin, Y., Zhou, J. “NG2 glia negatively regulates neuroinflammaton by modulating neuronal CX3CL1 expression." **In submission**

2. **Liu, Y.,** Zhou, Q., Tang, M., Fu, N., Shao, W., Zhang, S., Yin, Y., Zeng, R., Wang, X., Hu, G., Zhou, J. (2015) “Upregulation of alphaB-crystallin expression in the substantia nigra of patients with Parkinson's disease." **Neurobiology of aging**

3. Wang, Q., **Liu Y.,** Zhou J. (2015) "Neuroinflammation in Parkinson's disease and its potential as therapeutic target." **Translational Neurodegeneration**

4. Shao, W., Zhang, S., Tang, M., Zhang, X., Zhou, Z., Yin, Y., Zhou, Q., **Liu, Y.,** Huang, Y., Wawrousek, E., Chen, T., Li, S., Xu, M., Zhou, J., Hu, G., Zhou, J. (2013) "Suppression of neuroinflammation by astrocytic dopamine D2 receptors via alphaB-crystallin." **Nature**

5. **Liu, Y.** and Zhou, J. (2013) "Oligodendrocytes in neurodegenerative diseases." **Frontiers in Biology**

6. **Liu, Y.** and Zhou, J. (2013) "Dopaminergic modulation of astrocyte functions in the pathogenesis of Parkinson’s disease. **Pathways to Cures: Neurodegenerative Diseases in China**, S. Sanders, Z. Zhang, B. Tang, Eds. (Science/AAAS, Washington, DC, 2013), pp. [22-24].