

Kaibin Shi, MD

Department of Neurology, Beijing Tiantan Hospital, Capital Medical University
Institute for Immunology, Chinese Institutes for Medical Research

Email : kshi@cimrbj.ac.cn

Kaibin Shi is a neurologist specialized with management of patients with multiple sclerosis (MS), neuromyelitis optica spectrum disorders (NMOSD), myasthenia gravis, and inflammatory neuropathy. He completed his clinical and research training in Tianjin Medical University, Tianjin, China, and Barrow Neurological Institute, Phoenix, Arizona, USA, under the mentorship of Prof. Fu-Dong Shi. He studies the specific features of initiation, propagation of inflammatory and immune responses of the central nervous system, as well as therapeutic modulation of neuroinflammation in patients with MS/NMOSD and stroke, as well as corresponding animal models.

EDUCATION AND ACADEMIC APPOINTMENTS

2009-2017	Tianjin Medical University	MD in Clinical Medicine and Neurology
2017-2020	Barrow Neurological Institute, St Joseph's Hospital and Medical Center	Post-Doctoral Fellow in Neurology
2020-2021	Tianjin Medical University General Hospital	Resident in Neurology
2022-2024	Beijing Tiantan Hospital, Capital Medical University	Resident in Neurology
2024-now	Beijing Tiantan Hospital, Capital Medical University	Attending doctor in Neurology, Associate Investigator of Neurology
2024-now	Chinese Institutes for Medical Research	Assistant Professor

HONORS AND AWARDS

- ❖ 2016 9th Congress of the Pan-Asia Committee for Treatment and Research in Multiple Sclerosis (PACTRIMS) Best Poster Award.
- ❖ 2018 Post-doctoral Award of China Scholarship Council.
- ❖ 2019 Tianjin Municipal Natural scientific award, First Class in Natural Science.
- ❖ 2019 Top-cited Paper, Stroke and Vascular Neurology, Chinese Stroke Association.
- ❖ 2021 Young Talent Award, Chinese Stroke Association.
- ❖ 2022 Beijing Municipal Young Talent Award.
- ❖ 2023 Young Investigator Award of 31st European Charcot Foundation Annual Meeting.
- ❖ 2024 Young Scholar Award, Chinese Society for Immunology.

PRESENTATIONS ON INTERNATIONAL MEETINGS

- ❖ 2016 9th Congress of the Pan-Asia Committee for Treatment and Research in Multiple Sclerosis (PACTRIMS), Bangkok, Thailand. oral presentation and poster.

- ✦ International Stroke Conference (ISC) 2017, Houston, USA, poster.
- ✦ International Stroke Conference (ISC) 2018, Los Angeles, USA, oral presentation.
- ✦ American Academy of Neurology (AAN) Annual Meeting 2018, Los Angeles, USA, poster.
- ✦ American Neurological Association 2019, oral and poster.
- ✦ Stroke Immunology Conference 2020, Munich, Germany, oral presentation.
- ✦ International Stroke Conference (ISC) 2022, New Orleans, USA, oral presentation.
- ✦ Stroke Immunology Conference 2022, Munich, Germany, oral presentation.

FEATURED PUBLICATIONS

1. Jiang R, Lu Z, Wang C, Xiao J, Liu Q, Xu X, Shi J, Shen J, Zhu X, Gong P, Zhuang XQ, **Shi K***, Shi W*. Beta2 adrenergic receptor-mediated abnormal myelopoiesis drives neuroinflammation in aged patients with traumatic brain injury. *Science Advances*. 2024; 10(29): eadp5239.
2. **Shi K**, Li H, Chang T, He W, Kong Y, Qi C, Li R, Huang H, Zhu Z, Zheng P, Ruan Z, Zhou J, Shi FD, Liu Q. Bone marrow hematopoiesis drives multiple sclerosis progression. *Cell*. 2022;185(13):2234-2247.
3. **Shi K**, Zou M, Jia DM, Shi SX, Yang X, Liu Q, Dong Jf, Sheth KN, Wang X, Shi FD. tPA Mobilizes Immune Cells that Exacerbate Hemorrhagic Transformation in Stroke. *Circulation Research*. 2021;128(1):62-75.
4. **Shi K**, Shen J, Yue X. Primary central nervous system lymphoma with symmetric pyramidal tracts hyperintensity. *JAMA Neurol*. 2021;78(7):876-877.
5. Jin WN, **Shi K**, He W, Sun JH, Van Kaer L, Shi FD, Liu Q. Neuroblast senescence in the aged brain augments natural killer cell cytotoxicity leading to impaired neurogenesis and cognition. *Nature Neuroscience*. 2021;24(1):61-73.
6. Shi S, **Shi K**, Liu Q. Brain injury instructs bone marrow cellular lineage destination that suppresses neuroinflammation. *Science Translational Medicine*. 2021 Apr 14;13(589): eabc7029. doi: 10.1126/scitranslmed.abc7029.
7. **Shi K**, Tian DC, Li ZG, Ducruet AF, Lawton MT, Shi FD. Global brain inflammation in stroke. *Lancet Neurology*. 2019;18(11):1058-1066.

OTHER PEER-REVIEWED PUBLICATIONS

1. Yang M[#], Li Y[#], **Shi K[#]**, Wang X, Liu X, Huang X, Shi FD, Ma S, Li M*, Wang Y*. Single-Cell Transcriptomes of Immune Cells from Multiple Compartments Redefine the Ontology of Myeloid Subtypes Post-Stroke. *Advanced Sciences*. 2025; 12(13): e2408722.
2. Cheng N, Wang H, Zou M, Jin WN, Shi FD, **Shi K**. Brain-derived programmed death-ligand 1 mediates immunosuppression post intracerebral hemorrhage. *J Cereb Blood Flow Metab*. 2022;271678X221116048.
3. Zhang Z, Jiang S, **Shi K**, Li Y, Jin WN, Liu Q, Zhao T, Cheng H, Shi FD. Visualizing Seizure Propagation in Freely-moving Mice via Miniature Two-photon Microscopy. *Neurosci Bull*. 2022. doi: 10.1007/s12264-022-00947-1.
4. Zhou H, Gao F, Yang X, Lin T, Li Z, Wang Q, Yao Y, Li L, Ding X, **Shi K**, Liu Q, Bao H, Long Z, Wu Z, Vassar R, Cheng X, Li R, Shen Y. Endothelial BACE1 Impairs Cerebral Small Vessels via Tight Junctions and eNOS. *Circulation Research*. 2022;130(9):1321-1341.
5. Shi SX, Li YJ, **Shi K**, Wood K, Ducruet AF, Liu Q. IL (Interleukin)-15 Bridges Astrocyte-Microglia Crosstalk and Exacerbates Brain Injury Following Intracerebral Hemorrhage. *Stroke*. 2020;51(3):967-974.

6. Li H, Huang Z, Jia D, Xue H, Pan J, Zhang M, **Shi K**, Shi FD, Zhang C. Low-dose rituximab treatment for new-onset generalized myasthenia gravis. *J Neuroimmunol*. 2021 May 15; 354: 577528.
7. Tian DC, Xiu Y, Wang X, **Shi K**, Fan M, Li T, Li H, Su L, Ma Y, Xu W, Song T, Liu Y, Shi FD, Zhang X. Cortical Thinning and Ventricle Enlargement in Neuromyelitis Optica Spectrum Disorders. *Front Neurol*. 2020;11:872. doi: 10.3389/fneur.2020.00872.
8. Shi E, **Shi K**, Qiu S, Sheth KN, Lawton MT, Ducruet AF. Chronic inflammation, cognitive impairment and distal brain region alteration following intracerebral hemorrhage. *FASEB J*, 2019;33(8):9616-9626.
9. Yang CS, Guo A, Li Y, **Shi K**, Shi FD, Li M. DL-3-n-butylphthalide Reduces Neurovascular Inflammation and Ischemic Brain Injury in Mice. *Aging Dis*. 2019;10(5):964-976.
10. **Shi K**, Zhang J, Dong Jf, Shi FD. Dissemination of brain inflammation in traumatic brain injury. *Cell Mol Immunol*. 2019;16(6):523-530.
11. **Shi K**, Wood K, Shi FD, Wang X, Liu Q. Stroke-induced immunosuppression and post-stroke infection. *Stroke and Vascular Neurology*, 2018;3:34-41.
12. Zhang J*, **Shi K***, Li Z, Li M, Han Y, Wang L, Zhang Z, Yu C, Zhang F, Song L, Dong JF, La Cava A, Sheth KN, Shi FD. Organ- and cell-specific immune responses associate with defined outcomes in intracerebral hemorrhage. *FASEB Journal*, 2017.
13. Liu Q, Jin WN, Liu Y, **Shi K**, Sun H, Zhang F, Zhang C, Gonzales RJ, Sheth KN, La Cava A, Shi FD. Brain ischemia suppresses immunity in periphery and brain via different neurogenic innervations. *Immunity*, 2017, 46(3): 474-487.
14. Wang Z, Guo W, Liu Y, Gong Y, Ding X, **Shi K**, Thome R, Zhang GX, Shi FD, Yan Y. Low expression of complement inhibitory protein CD59 contributes to humoral autoimmunity against astrocytes. *Brain Behav Immun*. 2017; 65:173-182.
15. Tian DC, Su L, Fan M, Yang J, Zhang R, Wen P, Han Y, Yu C, Zhang C, Ren H, **Shi K**, Zhu Z, Dong Y, Liu Y, Shi FD. Bidirectional degeneration in the visual pathway in neuromyelitis optica spectrum disorder (NMOSD). *Mult Scler*. 2017. doi: 10.1177/1352458517727604.
16. **Shi K**, Wang Z, Liu YC, Gong Y, Fu Y, Li SW, Wood K, Hao JW, Zhang GX, Shi FD, Yan YP. CFHR1-modified neural stem cells ameliorated brain injury in a mouse model of neuromyelitis optica spectrum disorders. *J Immunol*. 2016 197:3471-80.
17. Sun N, Shen Y, Han W, **Shi K**, Wood K, Fu Y, Xi GH, Liu Q, Huang DR and Shi F-D. Selective S1PR1 modulation attenuates experimental intracerebral hemorrhage. *Stroke*, 2016, 47(7):1899-906.
18. Yan Y, Li Y, Fu Y, Yang L, Su L, **Shi K**, Li M, Liu Q, Borazanci A, Liu Y, He Y, Bennett J, Vollmer TL, Shi F-D. Autoantibody to MOG suggests two distinct clinical subtypes of NMOSD. *Sci China Life Sci*, 2016, doi:10.1007/s11427-015-4997-y
19. Yao Y, Miao W, Liu Z, Han W, **Shi K**, Shen Y, Li H, Liu Q, Fu Y, Huang D, Shi FD. Dimethyl Fumarate and Monomethyl Fumarate Promote Post-Ischemic Recovery in Mice. *Transl Stroke Res*. 2016, 7(6):535-547.