

Tentative Outline

Special Issue for Neuroscience & Biomedical Engineering

Title: Modeling, Measurement, and Application of Brain Interstitial Space

Guest Editors: Prof. Hongbin HAN, and Dr. Yiming LEI

Aims & Scope:

While neurons attract the most attention in neurobiology, our current knowledge of neural circuit can only partially explain neurological and psychiatric conditions of the brain. Thus, it is also important to consider influence of the interstitial space (ISS), where ISS is the major compartment of brain microenvironment that provides the immediate accommodation space for neural cells. Although ISS occupies 15% to 20% of the total brain volume, its properties are still fairly unknown. In this issue, we would collect multiple articles to present the state-of-the-art research on ISS. These articles includes the anatomy of the brain ISS under both physiological and pathological conditions, the biophysical modeling of brain ISS, the in vivo measurement techniques of brain ISS, and the implications of ISS knowledge on basic neuroscience and clinical applications.

Keywords: Interstitial Spac, Substance Transport, Biophysical Modeling, In Vivo Measurement, Drug Delivery

Subtopics:

The subtopics to be covered within this issue are listed below:

1. Yiming LEI, Huipo LIU, Qingyuan HE, Hongbin HAN, <The Biophysical Modeling of Substance Transport in Brain Interstitial Space>
2. Qingyuan HE, Yiming LEI, Hongbin HAN, <The MRI Sequence to Detect The Anisotropic Diffusion in Deep Brain>
3. Wei WANG, Hongbin HAN, <The Anatomy of Divisions of Brain Interstitial Space>
4. Chunyan SHI, Yiming LEI, Hongbin HAN, <The Regulation of Substance Transport in Brain Interstitial Space>
5. Xiangping GUAN, Hongbin HAN, <The Local Drug Delivery Through Brain Interstitial Space>
6. Deyong LV, Hongbin HAN, <The Interstitial Space Based Evaluation of Parkinson's Disease>

Schedule:

- ✧ Manuscript submission deadline: November 15th, 2015
- ✧ Peer Review Due: January 15th, 2016
- ✧ Revision Due: February 15th, 2016
- ✧ Announcement of acceptance by the Guest Editors: March 1st, 2016
- ✧ Final manuscripts due: April 1st, 2016

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