

Studies of neuroscientific discoveries can constrain and guide models of human behaviour based on the mechanisms underlying the therapeutic effects of neuromodulation in neurological and neuropsychiatric conditions using modelling and functional imaging techniques

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For [metabolic syndrome](#) and many other health issues, the brain plays a central role in controlling metabolic physiology in that it integrates information from other metabolic organs, sends regulatory projections and orchestrates the whole-body function for devastating diseases such as cardiovascular diseases, stroke and cancers. Emerging neurology studies suggest that brain dysfunction in sensing various internal cues or processing external cues may have profound effects on metabolic and other physiological functions. This research explores the brain-FSI-skull interfacing and modelling, dynamic brain mapping to optimization through identifying individualized biomarkers of disease, mechanisms underlying the therapeutic effects of neuromodulation in neurological and neuropsychiatric conditions using modelling and functional imaging techniques, closed loop control, and intracranial interventions that optimize current therapies in existing patient populations, implement new approaches and techniques, explore new targets, and define new disease populations. We also speculate key issues that need to be addressed on how to reveal relevant brain dysfunction that underlines the development of these disorders and diseases in order to develop new treatment strategies against these health problems. So as to decide the molecular signaling pathways through which the [brain](#) and the gastrointestinal system communicate to govern energy homeostasis, combined with emerging insights on the molecular mechanisms underlying successful surgery, gives reason to be optimistic that novel precision medicines that mimic, enhance, and/or modulate gut-brain signaling can have unprecedented potential for stopping various pandemics.

Biography

Xianfang YUE has completed her PhD at 2007 year from University of Science and Technology Beijing and postdoctoral studies from University of Birmingham. She is an Associate Professor at the University of Science and Technology Beijing, China. She has a combination of education and work experience to more than 10 years and achieved a high level of research and teaching, including publishing 4 books, publishing over 40 papers, awarded 3 national patents of invention and being awarded second prize of the [Provincial Science](#) and Technology Progress. She has a wide experience of project management skills to successfully complete research projects.

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