

Dear Editor:

We recommend an original research article entitled “**High modularity, more flexible of brain networks in patients with mild to moderate motor impairments after stroke**” for consideration by *Behavioural Brain Research*.

Most previous studies combine dynamic functional connectivity with k-means clustering to identify dwell state in all subjects or focus on regional functional connectivity variations. However, these approaches could not easily recognize the dynamic change of each participant or the switching pattern of nodes. This study took a distinctive perspective to investigate the dynamic reconfiguration in networks of the brain with pure motor impairment after stroke. This study has developed a data-driven algorithm in which modularity- Q provides information about community partitioning of the brain; flexibility, cohesion, and disjointedness deepen understanding of the dynamics of community reorganization. Our findings discovered that the post-stroke brain exhibited more modularity compared to HCs. Moreover, the whole brain showed higher flexibility and disjointedness, which reflects the dynamic whole-brain remodeling occurring after stroke. Additionally, this frequently and independently switching pattern of brain nodes mainly clusters in Default mode network. These dynamic changes positively correlated with lower limb motor performance in patients with mild-to-moderate motor impairment.

To our knowledge, the dynamic multilayer community structure model has yet to be applied to stroke in conjunction with magnetic resonance imaging. Our results offer active patterns of information exchange within brain networks after stroke, which would be of great interest to the readers of *Behavioural Brain Research* and would be helpful to advance the understanding of the pathological mechanisms in the post-stroke brain.

We recommend these individuals as potential reviewers due to their expertise in brain imaging. Guanqun Yao (1377393817@qq.com), Peijing Rong (drorongpj@163.com). However, we understand the final selection of reviewers is at the discretion of the journal's editorial team.

We confirm that this manuscript has not been previously published and is not considered for publication elsewhere. All authors have approved the manuscript for submission and have no conflicts of interest.

We appreciate your consideration of our manuscript and look forward to your reply.

Yours sincerely,

Xin Yu, Doc.

email: yusanjin1995@sina.com

Yihuai Zou, Prof.

email: zouyihuai2004@163.com

Department of Neurology, Dongzhimen Hospital, Beijing University of Chinese
Medicine, Beijing, CN 100700, China.