Special Issue

Functional Brain Imaging of Locomotion in Aging and Age-Related Diseases

Message from the Guest Editors

Structural and functional changes in normal aging and in age-related disease conditions are associated with cognition and performance on everyday tasks. The ability to walk is a robust predictor of health outcomes, and gait limitations predict mortality in older adults. Recently, an emerging optical brain imaging modality, namely, (fNIRS), has been utilized as a viable and reliable neuroimaging modality to probe brain activation patterns in real-life conditions, revealing that the prefrontal cortex plays a critical role in walking, notably under attention-demanding conditions, in healthy individuals; older adults; and patients with, stroke, multiple sclerosis, and Parkinson's disease. The aims and scope of this Special Issue are to enhance knowledge concerning the functional brain systems of locomotion as measured by fNIRS and other functional neuroimaging methods, both in healthy aging and age-related disease populations. Hence, we are soliciting cutting edge research studies utilizing fNIRS and other neuroimaging methods to investigate functional brain substrates of locomotion in the aging brain in normal and disease populations.

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