



"Effects of transcranial direct current stimulation (tDCS) in the physiological and in the ischemic mouse motor cortex"

by dr. Marco Cambiaghi , Università degli Studi di Verona

10th

MARZO 2022

15:00

ZOOM LINK

<https://unipd.zoom.us/j/83569499708?pwd=VmZXRkFXZVEwYWpHT1h3aElyZTd0QT09>

Transcranial direct current stimulation (tDCS) is a widely adopted non-invasive brain stimulation technique for the modulation of brain excitability. The direct neuromodulatory effects of tDCS beneath the electrode is considered to extend to nearby as well as distant brain areas, mainly depending on the activation state of the brain before and during stimulation. This is evident in physiological circumstances (e.g. during physical activity) but it is even more marked in pathological conditions (i.e. stroke).

Our lab is focusing on the study of tDCS aftereffects on direct and indirect modulation in the primary motor cortical area in mice while performing a motor task. We observed that unilateral stimulation is able to influence neural activity and plasticity in the contralateral hemisphere if applied during a simple motor task that activates motor areas bilaterally. This results could be of great relevance for the use of such technique in the chronic phase after brain ischemia. Moreover, in the photothrombotic mouse model of ischemia, the application of cathodal tDCS acutely (few hours) after the stroke onset was observed to improve functional recovery and act on non-neural cells, by modulating microglia morphology.



PNC
Padova Neuroscience Center



1222 • 2022
800
ANNI



UNIVERSITÀ
DEGLI STUDI
DI PADOVA