DIM & Cerveau Pensée

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Présentation des projets
PETITS ET MOYENS EQUIPEMENTS
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TRANSVIRE

Exploring cerebral function by Transcranial Magnetic Stimulation and Virtual Reality in stroke and schizophrenia

Laboratoire ou site d'accueil	Porteur de projet	Institution porteuse
Centre de Psychiatrie et Neuroscience Centre de recherche St Anne U894	Pascale Piolino	INSERM

TransVire use both Transcranial magnetic stimulation (TMS) and Virtual reality (VR) as translational approaches in two main clinical domains, stroke and schizophrenia.

TMS is a safe and non-invasive neurophysiological technique that allows for magnetic stimulation of the human cerebral cortex. TMS is an approved technique for neurophysiological characterizing of the cerebral substrates in health and disease. When delivered repetitively, TMS (rTMS) has the potential to provoke changes in cortical excitability inducing plastic modifications that has been widely evaluated as therapeutic tools in several neurological and psychiatric disorders. The synergy of TMS and rehabilitative procedures is now amply documented in the motor and aphasia domains. VR is a recent behavioral technique that enables to create three-dimensional computer generated environment with multi-sensory stimulations close to real life, in which participants are immersed.

This project proposal is divided into three interrelated core projects. The first two aim at determining the cerebral substrates of (i) post-stroke motor recovery, and (ii) motor signs in schizophrenia. The last implements VR, combined or not with rTMS, to understand the interplay between motor recovery and memory post-stroke, and between memory and motor impairments in schizophrenia.