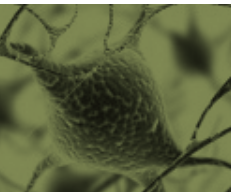

FUNDED PROJECTS

REVIS \\ RESTORATION OF VISION AFTER STROKE.

Austria\ Canada \ Finland \ France \ Germany \ Italy \ Israel \ Luxemburg \ Poland \ Romania \ Spain

About 1/3 of stroke patients, i.e. 2.1 Mio new cases annually, suffer damage to the brain´s vision processing centres which leads to serious visual impairments in everyday life activities such as reading, orientation in space and visually-guided mobility. Because the resulting blindness does not improve, new treatments options are urgently needed to help restore vision. However, surviving, residual visual tissue at or near the lesion can be activated by repetitive activation which helps the brain to adapt in process called post-lesion "neuroplasticity".

The aim of REVIS is to find new stimulation protocols to activate residual vision by inducing brain plasticity using non-invasive brain alternating (AC) or direct (DC) current stimulation. AC was already shown to improve vision after optic nerve damage and therapeutic DC effects have been studies in different neurological disorders.

Four European research centres and a commercial partner from Germany, Finland, Italy and Poland now join efforts to better understand the neuronal mechanisms of brain plasticity after visual field loss (hemianopias) and to find appropriate protocols to restore vision in stroke patients and experimental animals using non-invasive AC and DC current stimulation. The aim is to increase activation by inducing lasting synchronization changes in the brain of neuronal networks and functional connectivity patterns.

If successful, the project will uncover new ways to activate residual visual capacities after stroke which then provides the basis for a novel, non-invasive current stimulation medical device to help patients restore some of the lost vision and improve quality of life in lasting ways.

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