



Principal Investigator Grant

Project

«Association between wake theta activity and levodopa-induced dyskinesia in Parkinson's disease: a case-control study»

Granted amount	CHF 285'812
Starting date	January 2022
Duration	36 months



Main Applicant

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Research Study on Sleep

Slow wave sleep (SWS) plays a key role in brain plasticity. Specifically, slow wave activity (SWA) during SWS is recognized as the marker as well as the contributor of the downscaling of synaptic strength. Previous finding suggested a link between an impairment in this mechanism and levodopa-induced dyskinesia (LID) in Parkinson's disease. This association could either be due to an impaired SWA mediated downscaling mechanism per se or to a lower build-up process, determining a flooring effect.

Our previous findings talk in favor of the first hypothesis. To confirm it, we aim to investigate the build-up process during wake, reflected by the accumulation of theta activity throughout the day. Confirming our hypothesis would help in establishing a causative relationship between an abnormal sleep-related downscaling process and LID and would pave the way for pioneering SWA-enhancing therapies in PD and potentially in other neurodegenerative diseases