SAVE THE DATE: SCIENTIFIC LECTURE SERIES

MOVEMENT DISORDERS & NEUROLODULATION UNIT
CHARITÉ – UNIVERSITY MEDICINE BERLIN

10th July 2018 | 5:30 PM | Seminarraum Neurologie
Bonhoefferweg 3, Klinik für Neurologie (CCM)

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Iterative Strategies to Refine and Optimize DBS for Depression

It is now more than 15 years since the first subcallosal cingulate DBS implant for treatment resistant depression. While multiple centers, testing this and other targets, have replicated these initial positive findings, pivotal industry clinical trials have proven unsuccessful. Strategies to understand these contradictory outcomes are now a priority in the field, particularly with continued interest in development of more advanced invasive neurotechnologies for depression and other treatment refractory neuropsychiatric disorders.

Given emerging evidence of sustained long-term positive outcomes despite short term failed trials, a systematic assessment of variables contributing to the observed response heterogeneity are critically needed. More recent experimental studies have provided clues as to which patients are most likely to benefit and putative mechanisms mediating DBS antidepressant effects. Procedurally, standardization of the surgical procedure has been improved by use of individualized maps to guide electrode targeting to specified white matter tracts. Experimentally, next-generation devices now allow ongoing recordings of local field potentials during acute and chronic stimulation enabling real-time electrophysiological measurements of the time course, trajectory and sustainability of DBS-mediated effects. Strategic integration of combined multimodal neuroimaging, behavioral and neural recordings offers a unique opportunity to link first person experiences to changes in brain state towards a more comprehensive understanding of illness and recovery.

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