

## **Non-invasive brain stimulation in schizophrenia: Current status and perspectives**

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Non-invasive transcranial brain stimulation (NTBS) is available now for more than 10 years in clinical practice in schizophrenia care and under research for this indication for more than 20 years. In the beginning, we were enthusiastic to have a new pillar in the treatment of difficult-to-treat symptoms, such as persistent auditory verbal hallucinations or negative symptoms. However, despite a tremendous high number of clinical trials, there is still a debate whether NTBS should be offered in routine care or not.

The talk will focus on the development of this research area specifically emphasizing some landmark trials focussing on repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) and show the current evidence in relation to recommendations from guidelines. Moreover, novel aspects in the development of more efficacious protocols, the concept of combining several plasticity-increasing techniques (e. g. cognitive training and NTBS) and strategies to individualize treatment will be provided. Electroconvulsive therapy (ECT) will be addressed especially with regards to treatment options for severely affected patients with schizophrenia.