



“Sensory dysfunction in schizophrenia”

Conférence le Mercredi **16 janvier 2019 après midi**
CH Le Vinatier, bâtiment 416, 2ème étage, salle 8
95 boulevard Pinel – 69677 BRON

Daniel C. Javitt, MD, PhD, Professeur de psychiatrie, Departments of Psychiatry and Neuroscience, Nathan Kline Institute & Columbia University
<https://www.columbiapsychiatry.org/profile/daniel-c-javitt-md>
<https://www.bbrfoundation.org/about/people/daniel-c-javitt-md-phd>

Dr. JAVITT uses neurophysiological methods, such as EEG and event-related potentials (ERP), and functional brain imaging to investigate the role of NMDA receptors in sensory processes such as auditory mismatch negativity (MMN) and visual magnocellular activity and the contribution of NMDA receptor dysfunction to cognitive impairment in schizophrenia. These studies have provided new insights into contributions of sensory dysfunction to impairments in higher level processes in schizophrenia, including impairments in attention, perception, social cognition, and reading. Dr. Javitt's research has led to the development of new classes of medication for schizophrenia, including glycine transport inhibitors, that are currently in phase III clinical trials. Dr. Javitt's most recent research focuses on the role of brain oscillations in cognition, and on the ability of brain stimulation techniques, such as transcranial direct current stimulation (tDCS), to modulate normal and abnormal brain activity.

Résumé de la conférence

Schizophrenia is increasingly being viewed as a “whole brain” disorder with deficits affecting widespread cortical and subcortical networks. Within this context, studies of auditory cortical function may be particularly important both because auditory processing deficits directly affect social and occupational function and because these systems are well characterized at the basic science level, permitting informative translational research. Speaker focus on multiple aspects of auditory dysfunction in schizophrenia using behavioral, neurophysiological and fMRI-based approaches. Four main themes emerged. First was a focus on response disturbances within the early auditory system, using paradigms such as sensory EEG and MEG-based responses. Second, behavioral deficits were noted in processing related to local interaction within auditory regions, using paradigms such as tone-matching task. These deficits provided potential model systems to understand impaired connectivity within the brain in schizophrenia more generally. Third, several auditory measures were found to correlate highly with symptoms and/or higher neurocognitive and social processing. These findings highlight links between perceptual-level disturbance and clinical manifestation. Finally, the potential involvement of specific neurotransmitter receptors, including N-methyl-D-aspartate (NMDA)-type glutamate receptors and alpha7 nicotinic receptors were discussed as potential etiological mechanisms. Overall, the meeting highlighted the contributions of auditory pathway dysfunction to the etiopathogenesis of neurocognitive dysfunction in schizophrenia.

Bibliographie brève

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