Preclinical models of schizophrenia

As in several previous instances, the International Journal of Neuropsychopharmacology, the official journal of the CINP, publishes high-level reviews based on presentations made at CINP Congresses. The following Section of this Issue of the International Journal of Neuropsychopharmacology contains four review articles written by speakers of two different symposia at the 28th Congress of the CINP, which took place in Stockholm, Sweden, in June, 2012. The four articles review different preclinical models of schizophrenia, covering cellular, neurochemical, electrophysiological and behavioral studies and summarize recent advances in the field made at the presentations by four speakers, (Mark A. Geyer, Javier González-Maeso, Herbert Y. Meltzer and Francesc Artigas).

The article by Halberstadt and Geyer reviews the use of serotonergic hallucinogens as preclinical models of schizophrenia and the use of these agents in four different behavioral models, as well as the neurochemical mechanisms involved and their translational value. Likewise, the article by Moreno and Gonzalez-Maeso reviews the role of 5-HT$_{2A}$ and mGluR2/3 receptors in the neurobiology and treatment of schizophrenia, also paying attention to the involvement of such receptors in some preclinical and behavioral models. The article by Meltzer et al reviews the effects of subchronic treatment with non-competitive NMDA receptor antagonists on the novel object recognition test, a rodent model of declarative memory, as well as the reversal of these effects by atypical antipsychotics and other receptor ligands, in order to identify new targets for treatment of some cognitive deficits in schizophrenia. Finally, the article by Celada et al reviews the alterations produced on thalamo-cortical circuits by serotonergic hallucinogens and non-competitive NMDA receptor antagonists and the reversal of these effects by classical and atypical antipsychotic drugs.

Overall, the four articles provide the reader with a timely overview of relevant preclinical models of schizophrenia which will help to identify new targets for the development of new drugs for the treatment of schizophrenia symptoms which are poorly treated by current drugs. We thank the speakers for finding the time in their busy schedules to write these reviews and hope that this initiative will continue at future CINP Congresses, starting with the 29th Congress next year in June in Vancouver, Canada.

Enjoy reading !!

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