

NMDAR hypofunction at the crossroads of psychosis and cognition: insights from schizophrenia and anti-NMDAR encephalitis



Abstract

This workshop brings together experts from molecular psychiatry, immunology, and cognitive neuroscience to explore the role of NMDARs in both pathophysiology and cognition through the lens of Schizophrenia and anti-NMDAR encephalitis. The first part of the workshop will focus on the molecular and cellular mechanisms that implicate NMDAR hypofunction in schizophrenia, including evidence from genetic, pharmacological, and post-mortem studies. The discussion will then pivot to anti-NMDAR encephalitis, highlighting its clinical features, immunological basis, and the insights it offers into receptor-level disruptions.

Despite vastly different etiologies, both disorders manifest overlapping symptoms, such as psychosis and severe cognitive impairments, raising compelling questions about shared circuit-level vulnerabilities. Building on this comparison, the final segment of the workshop will examine the role of NMDARs in working memory—a fundamental cognitive function that is similarly disrupted in both conditions.

Agenda

DAY 1 Tuesday December 9th

SESSION 1

Molecular Mechanisms of neuropsychiatric disorders

→ Chair: Gisela Sugranyes (IDIBAPS)

Speakers

- · Josep Dalmau (IDIBAPS/CaixaResearch Institute, Barcelona)
- · Guillermo Horga (Columbia University)
- · Ines Khadimallah (Lausanne University Hospital)
- · Gemma Modinos (King's College London)

SESSION 2

Preclinical research of NMDA-related neuropathologies: comparing animal models across the NMDA-disease spectrum

→ Chair: Carles Sindreu (CIBERER/IDIBAPS)

Speakers

- · Patricia Gassó (University of Barcelona/IDIBAPS)
- · Christian Geis (Jena Univ. Hospital)
- · Estíbaliz Maudes (University Medical Center Göttingen)
- · Katherina Schmack (Francis Crick Institute)

DAY 2

Wednesday December 10th

SESSION 3

The role of NMDAR in Working Memory: a comparison across models and diseases

→ Chair: Jaime de la Rocha (IDIBAPS)

Speaker

- · Albert Compte (IDIBAPS, Barcelona)
- John Murray (Dartmouth College)
- · Min Wang (Yale School of Medicine)



 \rightarrow Participants to the workshop will be able to present their work in poster format.

→ Registration information will be provided soon.