



META-BRAIN

Press Release

International experts to explore new strategies for restoring brain function after injury at FENS Forum satellite event in Barcelona

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International experts to explore new strategies for restoring brain function after injury at FENS Forum satellite event in Barcelona

- Leading researchers in neuroscience, computational modelling and neuromodulation will explore new approaches for understanding and modulating brain activity following brain lesions.

Barcelona will host the satellite event “*Perilesional Slow Waves After Brain Lesion: Mechanisms, Models, and Neuromodulation*” on 11 July 2026, organised by the Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) and the European projects META-BRAIN and NEMESIS.

The event is part of the official satellite programme of FENS Forum 2026, Europe's largest neuroscience congress and one of the world's leading scientific meetings in the field, bringing together thousands of researchers, clinicians and innovators from across the globe.

Understanding how brain activity changes after injury

The satellite event will focus on a growing area of neuroscience research that could help explain why recovery after brain injury varies so widely between patients and how future neuromodulation strategies may improve functional outcomes.

Traditionally associated with sleep, slow waves are increasingly being observed in awake patients after brain lesions. Increasing evidence suggests that these sleep-like dynamics may disrupt communication across brain networks and contribute to functional deficits, opening new avenues for understanding brain dysfunction and developing targeted therapeutic interventions.

Beyond advancing our understanding of peri-lesional slow waves, the event will explore whether these abnormal activity patterns can become a therapeutic target and how emerging neuromodulation approaches may contribute to restoring brain function after injury.

The programme combines perspectives from experimental neuroscience, clinical

neurology, computational modelling and neurotechnology to examine the mechanisms underlying peri-lesional slow waves, their consequences for large-scale brain dynamics, and emerging strategies for restoring normal activity patterns. Sessions will also cover evidence from patients and experimental models, advances in mechanistic modelling of abnormal brain activity, and the latest developments in non-invasive brain stimulation, magnetoelectric nanoparticles and other advanced strategies for targeted neuromodulation.

International experts from leading institutions

The programme will feature keynote lectures by Maurizio Corbetta (University of Padua) and Gustavo Deco (Universitat Pompeu Fabra), alongside presentations by internationally recognised researchers from leading institutions across Europe.

Confirmed speakers also include Marcello Massimini and Mario Rosanova (University of Milan); Manuela Allegra and Giulio Morri (University of Padua); Mavi Sanchez-Vives, Leonardo Dalla Porta, Joana Covelo and Nathalia Cancino (IDIBAPS); Tomas Berjaga i Buisan (Universitat Pompeu Fabra); Giulio Ruffini (Neuroelectronics); Salvador Pané and Elric Zhang (ETH Zurich); Marta Parazzini (Consiglio Nazionale delle Ricerche, CNR); and Margarita Zachariou (Cyprus Institute of Neurology and Genetics).

Together, they will offer complementary perspectives spanning clinical neuroscience, experimental models, computational neuroscience, brain stimulation technologies and nanotechnology-based neuromodulation.

The programme will also include Young Investigator Flash Talks, providing early-career researchers with an opportunity to present their work and engage with leading experts in the field. The event will conclude with a panel discussion bringing together all speakers to debate the possibilities and limitations of modulating pathological slow waves.

Attendance is free of charge, but prior registration is required. Full programme details and registration information are available at: <https://meta-brain.eu/fens-2026-satellite>.

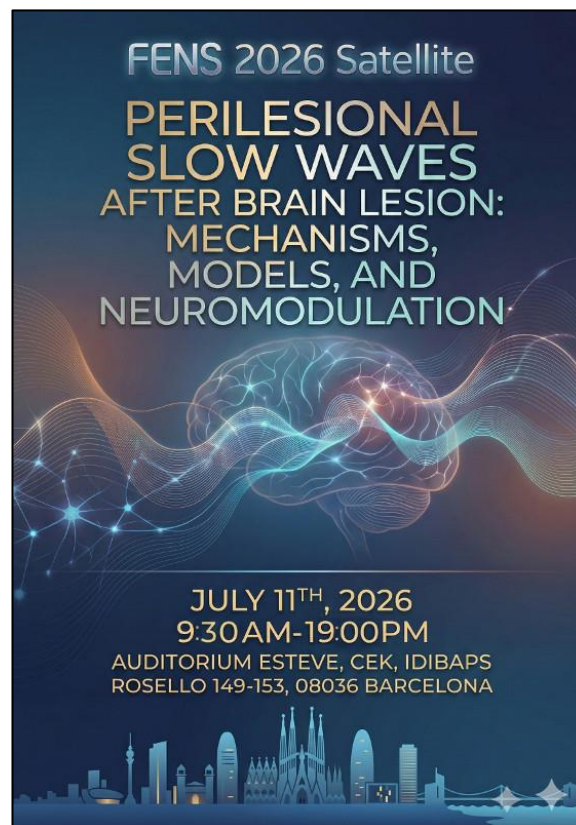
About the META-BRAIN project

META-BRAIN (MagnetoElectric and Ultrasonic Technology for Advanced BRAIN modulation) is a European Union-funded research project developing innovative magnetoelectric and ultrasound-based technologies for precise brain modulation. By

combining neuroscience, nanotechnology, advanced materials and computational modelling, the project explores new approaches for understanding and modulating brain activity with potential future applications in neurological disorders.

The consortium brings together IDIBAPS, Hospital Clínic de Barcelona, Centro de Investigación Biomédica en Red (CIBER), Consiglio Nazionale delle Ricerche (CNR) and its research institutes Istituto di Elettronica e di Ingegneria dell'Informazione e delle Telecomunicazioni (CNR-IEIT) and Istituto per la Microelettronica e Microsistemi (CNR-IMM), G.tec Medical Engineering, ETH Zurich, the Cyprus Institute of Neurology and Genetics (CING), and Zabala Innovation.

Event poster:



More information about the project: <https://meta-brain.eu>

Press contact: Mariano Echávarri | mechavarri@zabala.es | M (+34) 673 04 78 78