Okayama University Next-Generation Research Hub Seminar (Mouse 3D brain)

Date & Time:
Thursday, March 19 2026 | 14:00–15:30
Venue: Seminar Room, 1st Floor, Basic Research Building

Speaker: **Dr. WANG ZIYI**
Okayama University

Title: **CTBP2/ERBB4 Identified by Bioinformatics as Key Regulator of Serotonergic Neurons: A Potential Pathway in Anorexia Nervosa.**

Anorexia nervosa (AN) is a severe psychiatric disorder characterized by extreme dietary restriction, hyperactivity, and high mortality. CTBP2, a metabolite-sensitive transcriptional corepressor, emerges as a potential molecular hub linking metabolic signaling, serotonergic regulation, and perineuronal net (PNN) plasticity. It may regulate TPH2 and SLC6A4 and interact with the ERBB4–mTOR/YAP/TAZ axis to modulate neuronal activity. Region- and sex-specific expression patterns suggest a contribution to AN vulnerability, highlighting the CTBP2–ERBB4 network as a potential therapeutic target.

Guest Speaker: **Prof. Jessica Kwok**
University of Leeds

Title: **Precision Regulation of Perineuronal Nets (PNNs) for Functional Enhancement in the Brain.**

Perineuronal nets (PNNs) have long been recognized as structural regulators of synaptic stability and critical period plasticity. However, emerging evidence reveals that PNNs are not static barriers but dynamic, responsive matrices whose formation, degradation, and remodeling shape the brain's capacity for adaptive change. This seminar explores how precise regulation of PNN states influences functional enhancement across diverse neurological conditions, including spinal cord injury and neurodegeneration. The talk will showcase how well-timed modulation can significantly improve recovery and circuit function.

Contact: MBB, Prof. Toshitaka Oohashi (Shikata 7127, oohashi@cc)
This seminar can be counted as a doctoral course in "Research Methodology."