



UNIVERSITÀ  
DEGLI STUDI  
DI BRESCIA

DIPARTIMENTO DI MEDICINA MOLECOLARE E TRASLAZIONALE

## “Revolutionizing Neuronal and Cardiac Research with High Resolution Brain-on-Chip Technologies”



**Antonella Di Bello, PhD**

**Marco Aquila, PhD**

3Brain AG



**MARTEDI' 23 MAGGIO 2023 – ORE 13:00**

**AULA E**

Edificio Centrale, Viale Europa 11

## ABSTRACT

Recent advances in technology and research methodologies have led to substantial progress in understanding of neurological and cardiac conditions and the development of potential remedies.

Our seminar will focus on the evolution of **multi-electrode array (MEA)** devices and their impact on neuroscience and cardiac research.

3Brain's **HD-MEA** is a state-of-the-art technology that enables *in vitro* characterization of the physiological and pathological functional activity of neuronal as well as cardiac cell cultures. By recording the electrical activity of thousands of cells simultaneously, HD-MEA provides a versatile tool to characterize signal processing mechanisms in detail and improve the reliability of drug screening and toxicological assays. In addition, the use of HD-MEA technology reduces the need for animal testing.

We will also introduce our latest innovation, **3D HD-MEA** technology: the only gold standard that enables precise characterization of cellular activity from within the tissue. 3D-MEA technology allows the full exploitation of any 3D models, such as **brain organoids** and **cardioids**.

During the seminar, the 3Brain team will be on hand to answer any questions and share the benefits of these advanced technologies.