

SEPT 29 - OCT. 03, 2025 TIRANA, ALBANIA

## nanoBalkan CONFERENCE

## 1<sup>st</sup> Workshop Low-dimensional materials for Neuroscience and Biomedicine Tirana, Albania (October 1, 2025)

During the NanoBalkan Conference 2025, a dedicated day will host the **Satellite Workshop organized in the framework of the 2D-BioPAD project**, on the topic "Low-dimensional materials for Neuroscience and Biomedicine". This workshop will bring together leading experts from academia and industry to explore how atomically thin materials, such as graphene, transition-metal dichalcogenides, MXenes, and other low-dimensional systems, are shaping the future of neuroscience and biomedicine. Chemists, physicists, engineers, and clinicians will discuss advances in implantable electrodes, biosensors, and precision drug nanocarriers, highlighting both fundamental progress and translational opportunities.

The main objectives of the workshop are:

- **Showcase Emerging Applications:** Provide a comprehensive overview of how 2D and other low-dimensional materials are enabling new approaches in neuroscience and biomedical engineering.
- **Foster Interdisciplinary Dialogue:** Encourage collaboration among experts in chemistry, physics, engineering, and life sciences. By bridging disciplines, the workshop aims to accelerate innovation and create synergies across diverse research communities.
- **Connect Academia and Industry:** Facilitate knowledge exchange between academic researchers and industry stakeholders to strengthen technology transfer pathways and drive the development of market-ready biomedical solutions.
- **Promote Networking Opportunities:** Embedded within the broader NanoBalkan Conference, participants will benefit from dedicated discussions, networking events, and cross-disciplinary interactions throughout the conference, amplifying the impact of the workshop.

VENUE: Tirana International Hotel & Conference Centre

DATE: October 1, 2025

## **ORGANISING COMMITTEE:**

Antonio Correia (Phantoms Foundation, Spain)

Arben Merkoçi (ICN2, Spain)

Marianna Rossetti (ICN2, Spain)

Aristides Bakandritsos (Palacky University of Olomouc, Czech Republic)

Apostolos Tsolakis (Q-PLAN INTERNATIONAL, Greece)









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**Chairperson: Makis Angelakeris** 

14:30-14:50	"Magnetic nanoparticles as biosensing boosters"  Makis Angelakeris (Aristotle University of Thessaloniki, Greece)	(I)
14:50-15:10	"Water-dispersible graphenes for (bio-)sensing application"  Stefano Casalini (University of Padua, Italy)	(I)
15:10-15:30	"Engineering 3D-Printed Microneedles for Transdermal Delivery in Alzheimer's Disease" <b>Dimitrios Fatouros</b> (Aristotle University of Thessaloniki, Greece)	(I)
15:30-15:50	"Nanostructured Capacitive Biosensing Platforms for Clinical Diagnostics" <b>Danilo Echeverri</b> (ICN2, Spain)	(I)
15:50-16:10	"The Aptamer advantage: Biosensing Solutions for Neurohealth and Environment" <b>Sandeep Kumar</b> (NOVAPTECH, France)	(I)
16.10-16:30	"Electrochemical Sensors for the detection of neurotransmitters: from plasma to in-vitro neurodegenerative models"  Alessandro Silvestri (Università Ca' Foscari Venezia, Italy)	(I)
15:30-16:40	Wrap-up and Closing remarks	
16:40-17:10	Coffee break	





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