



# UNAT

## Ultra-small Nanohybrides for Advanced Theranostics

Newsletter 2 – April 2022

### Consortium



#### Coordinator

Université Claude  
Bernard Lyon 1  
*France*



Corporation  
Science Park  
Taras  
Shevchenko  
University Of Kyiv  
*Ukraine*



National Research Council of Italy

Consiglio  
Nazionale Delle  
Ricerche  
*Italy*



BIOEMTECH

Bioemission  
Technology  
Solutions IKE  
*Greece*

### The project

Nanoscale materials have gained a place in the spotlight as enablers of combination diagnostic-therapeutic technologies due to their tiny penetrating sizes and their unique functional properties.

**Nanohybrids** that contain both organic and inorganic components, including metallic ones, offer tremendous opportunity for the functionalisation of biological or bioactive molecules.

The EU-funded UNAT project will explore the capabilities of metal-carbon nanohybrids for multimodal in vivo imaging and therapy of tumours via electromagnetic radiation.

The diagnosis and therapy of cancer will be evaluated through an ambitious campaign of preclinical in vitro and in vivo experiments.

### Key figures

**4 years (2021-2024)**

**4 partners**

**4 countries**

**832 k€**

More information on [www.unat-project.eu](http://www.unat-project.eu)

## Upcoming UNAT workshop – 31<sup>st</sup> May 2022 - Programme

The first workshop aiming at disseminating the results of the UNAT project is planned in the frame of the Nanohybrids XVIII-2022 conference from 29<sup>th</sup> May 2022 to 2<sup>nd</sup> June 2022 – Bastia, Corsica – France - <https://ulrichdarbost.wixsite.com/nanohybrid>

### PROGRAMME

- 09.00 Iafisco Michele  
*On the Use of Calcium Phosphate Nanoparticles as Agent for Magnetic and Nuclear in Vivo Imaging*
- 09.30 Skliris Antonis  
*Radiolabeling and imaging approaches for carbon-based nanohybrids*
- 10.00 Gelloen Alain  
*The secret life of cells. What has to be known to efficiently test nanoparticles*
- 11.00 Kuznietsova Halyna  
*Antitumor activity of carbon dots with different chemical compositions.*
- 11.30 Lysenko Vladimir  
*Photo- and RF-induced heating of colloidal carbon dots with temperature dependent fluorescence*
- 12.00 Mussabek Gauhar  
*Preparation and characterization of the carbon-silicon hybrid nanostructures*

## Video “Ukraine war: Researchers on the run” produced by Deutsche Welle



Ukrainian biologists Halyna Kuznietsova and Natalia Dziubenko working at Université Claude Bernard Lyon 1, the Coordinator of the UNAT project.

Watch the interview with DW's Sonia Phalnikar:

<https://www.dw.com/en/ukrainian-scientists-find-refuge-in-france/av-61748596>

## UNAT Implemented secondments

Research and Innovation Staff Exchange (RISE) projects fund short-term exchanges (“secondments”) for staff to develop careers combining scientific excellence with exposure to other countries and sectors. RISE enables more interaction between academia and non-academic organisations within Europe and worldwide.

The following secondments were implemented between October 2021 and April 2022:

- Ivan IVANOV - From Science Park to UCBL – 1 month (10/2021)
- Sergii LYTVYENKO - From Science Park to UCBL – 1 month (10/2021)
- Alexander ZADERKO – From Science Park to UCBL – 1 month (10/2021 - 11/2021)
- Liudmyla KOSTENKO - From Science Park to UCBL – 1 month (10/2021 - 11/2021)
- Yurii MILOVANOV - From Science Park to UCBL – 1 month (11/2021)
- Francesca CARELLA – From CNR to BIOEMTECH – 1 month (11/2021 - 12/2021)
- Vladimir LYSENKO – From UCBL to SCIENCE PARK – 3 months (11/2021 - 02/2022)



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