Funded by
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Project financed from the Horizon Europe Work Program
2021-2027, Grant agreement 101087007-eBio-hub

D6.2 - Website of the project

DATE OF DELIVERY: 29.03.2024

Project details	
Project number	101087007
Project name	**eBio-hub: Chair of Research Centre in Biomedical Engineering**
Project acronym	eBio-hub
Call	HORIZON-WIDERA-2022-TALENTS-01
Topic	HORIZON-WIDERA-2022-TALENTS-01-01
Type of action	HORIZON Coordination and Support Actions
Granting authority	European Research Executive Agency
Coordinator	National University of Science and Technology Politehnica Bucharest

Deliverable information	
Deliverable number	D6.2
Work Package number	6
Deliverable title	Website of the proje
Lead beneficiary	National University of Science and Technology Politehnica Bucharest
Due date	31.03.2024
Actual submission date	29.03.2024
Type of deliverable	Report
Dissemination level	Public

History of changes

Version	Date	Description	Contributors
V0.1	24.11.2023	First draft	Jana Ghitman
V0.2	15.01.2024	Second draft	Cornel Cobianu Mariana Ionita Gratiela Gradisteanu
V1.0	12.03.2024	Final version for submission	Jana Ghitman Horia Iovu

Disclaimer:

Contents

ABOUT THE **eBio-hub** PROJECT

The main objective of **eBio-hub** is to establish a ***Center of Excellence in Bioengineering*** within the National University of Science and Technology Politehnica Bucharest (POLITEHNICA Bucharest). The goal of **eBio-hub** project is to unlock and foster excellent research in biomedical engineering, capitalizing the existing knowledge in POLITEHNICA Bucharest and integrating with local research and clinical expertise from University of Bucharest, Carol Davila University of Medicine and Pharmacy and local hospitals as well as making use of the state-of-the-art research infrastructure in biomedical engineering (*INOVABIOMED*) by setting up a strong research group and attracting top academics in the field, rising the competitiveness of POLITEHNICA Bucharest research in the European Research Area (ERA).

eBio-hub will operate as an interdisciplinary research center at the interface between chemistry, biology, IT, micro and nanotechnology and medicine. The project aims to develop micro, nano and bio-integrated solutions that will address major global challenges in the biomedical field. In this context, eBio-hub will increase the attractiveness and impact of the National University of Science and Technology Politehnica Bucharest through research excellence (illustrated quantitatively and qualitatively through indicators such as publications in peer reviewed journals, national and international collaboration or grants). Furthermore, the project will contribute to the growth of Romanian and EU economy by attracting and nurturing research talents, creating portfolios of intellectual property, supporting the local industry or commercializing new technologies.

The project's sustainability will be insured by research funding procurement for projects, structured cooperation with local or international industrial and public research and educational entities, establishment of a new study field in the doctoral programs at POLITEHNICA Bucharest, PhD summer school and other training programs. By setting a best practice example and through a well-thought outreach campaign the project will stimulate structural changes throughout POLITEHNICA Bucharest.

EXECUTIVE SUMMARY

This document is a deliverable of the **eBio-hub** project, funded under the Horizon Europe Work Program 2021-2027, Grant agreement 101087007-eBio-hub.

The aim of this document is to provide a general overview of the **eBio-hub** project website and activities performed for dissemination and communication the **eBio-hub** project to different target groups and general public. The deliverable "Website of the project" (D6.2) is produced in M15 as part of Work Package 6 "Dissemination, exploitation, and communication activities".

The website is an interactive environment providing access to all aspects related to the project implementation and progress of the **eBio-hub** project. The website has an intuitive interface and can be easily used, moreover it is linked with the social media accounts of (LinkedIn, Twitter, Facebook, Instagram).

The website contains general information **eBio-hub** about the project, its main goal, research directions and work packages, Scientific Advisory Board and research teams, open positions to recruit the **eBio-hub** team members, information on past and future events organized by the **eBio-hub** team, news, dissemination as well as all public deliverables accomplished within the implementation period.

The document is drafted by the DPD under the supervision of PD, with inputs from all the management team members.

Website of the Project

1. INTRODUCTION

This deliverable presents a summary of the **eBio-hub** project website and activities performed for dissemination and communication the **eBio-hub** project to different target groups as well as to general public. The website is an interactive environment providing access to all aspects related to the project implementation and its progress. The website has an intuitive interface and can be easily used, moreover it is linked with the social media accounts of (LinkedIn, Twitter, Facebook, Instagram).

The website contains central information about the project, its main goal, research directions and work packages, members of the Scientific Advisory Board as well as members of the research team, open positions, information on past and future events organized by the **eBio-hub** team, news, dissemination and communication activities as well as all the list of deliverables accomplished within the implementation period.

The deliverable "Website of the project" (D6.2) is produced in M15 as part of Work Package 6 "Dissemination, exploitation, and communication activities".

Table 1. Deliverable foreseen within WP 6 and timeline

Deliv. No.	***Deliverable title***	***Lead beneficiary***	***Type***	***Dissemination level***	***Due dates***
D 6.1	Plan for dissemination, exploitation and communication	POLITEHNICA Bucharest	Report	Sensitive	June 2023 (M6) June 2025 (M30) December 2027 (M60)
D 6.2	Website of the project	POLITEHNICA Bucharest	Report, website	Public	March 2024 (M15)

2. **eBio-hub**: WEBSITE OF THE PROJECT

The **eBio-hub** website is of utmost importance in enhancing the visibility of the project, since it serves as a critical and central communication tool for the wide dissemination of the project activities, deliverables, and outputs. The website offers essential information on the project, such as its concept and objectives, workplan, activities, as well as information about the **eBio-hub** team, publications, news, events, and others. Considering that the website is the mirror of the **eBio-hub**, its sections and subsections are constantly updated with interesting and relevant information for maximizing the project audience. The website is located on https://ebio-hub.upb.ro/ and it is functional since January 2023.

General information

Address	https://ebio-hub.upb.ro
Contact e-mail	ebio-hub@upb.ro
Language	English

2.1. The structure of the eBio-hub website

The structure of the website of the project is presented below:

Name of the section	***Content and subsections***
EBIO-HUB/HOME	- About - the main goal of the project - Join eBio-hub research team - Recent News - Last eBio-hub Events
PROJECT	➢ About - Mission - Vision - Strategy ➢ Description of the project - General Objective - Specific Objectives - Work Plan ➢ Deliverable
TEAM	➢ Scientific Advisory Board ➢ Research Team

RESEARCH	➢ Directions ➢ Dissemination - Research articles - Conference publications ➢ Projects - National Projects - European/International Projects
NEWS	➢ News
EVENTS	➢ eBio-hub Events ➢ Other Events
JOIN US	➢ Open Positions ➢ Closed Positions
CONTACT	➢ Contact email ➢ Location ➢ Contact phone number

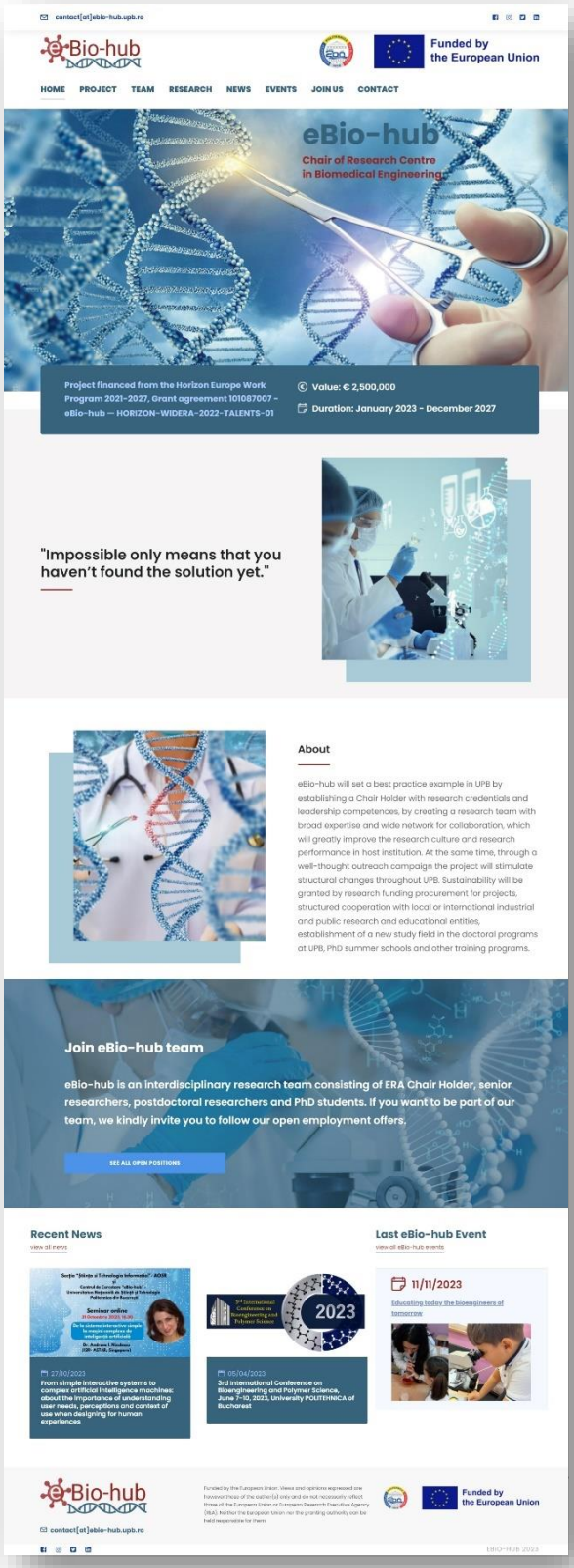
2.2. eBio-hub website design

The **eBio-hub** website represents the main tool in enhancing the visibility of the project, since it serves as a critical and central communication tool for the wide dissemination of the project activities, deliverables, and outputs. The website offers general information on the project, such as its concept and objectives, workplan, activities, as well as information about the **eBio-hub** team, publications, news, events, other projects, access to open access publications, public deliverable, social media accounts of the project and other useful information.

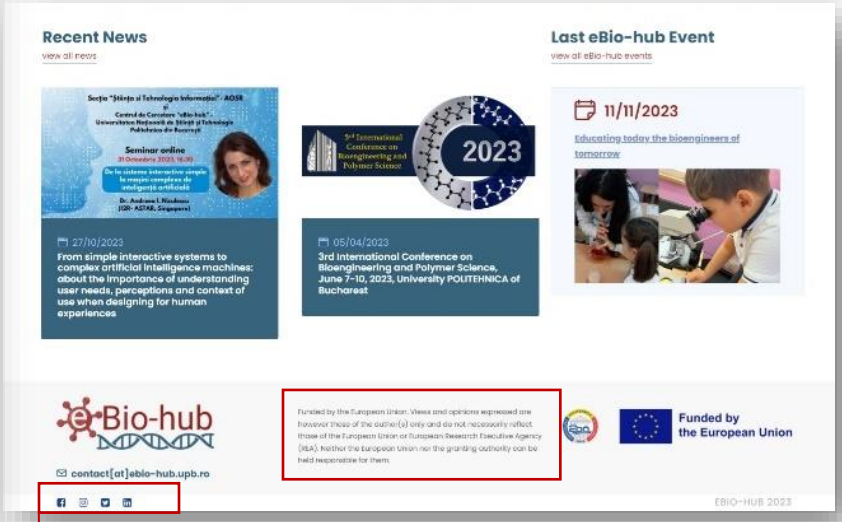
2.3. Detailed presentation of eBio-hub website

The full presentation of the eBio-hub structure along with the organization of each section and subsections is depicted in this section.

At the time of submission of Deliverable 6.2 "Website of the project" M15, the final version of the website is available, and it is fully functional with all the sections completed and updated where necessary/relevant.



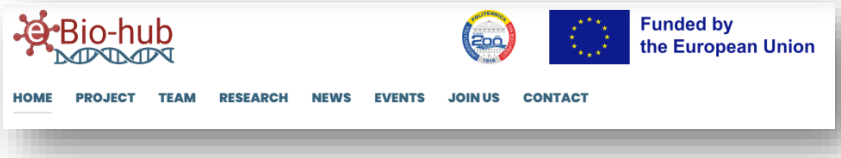
Visual identity of the project



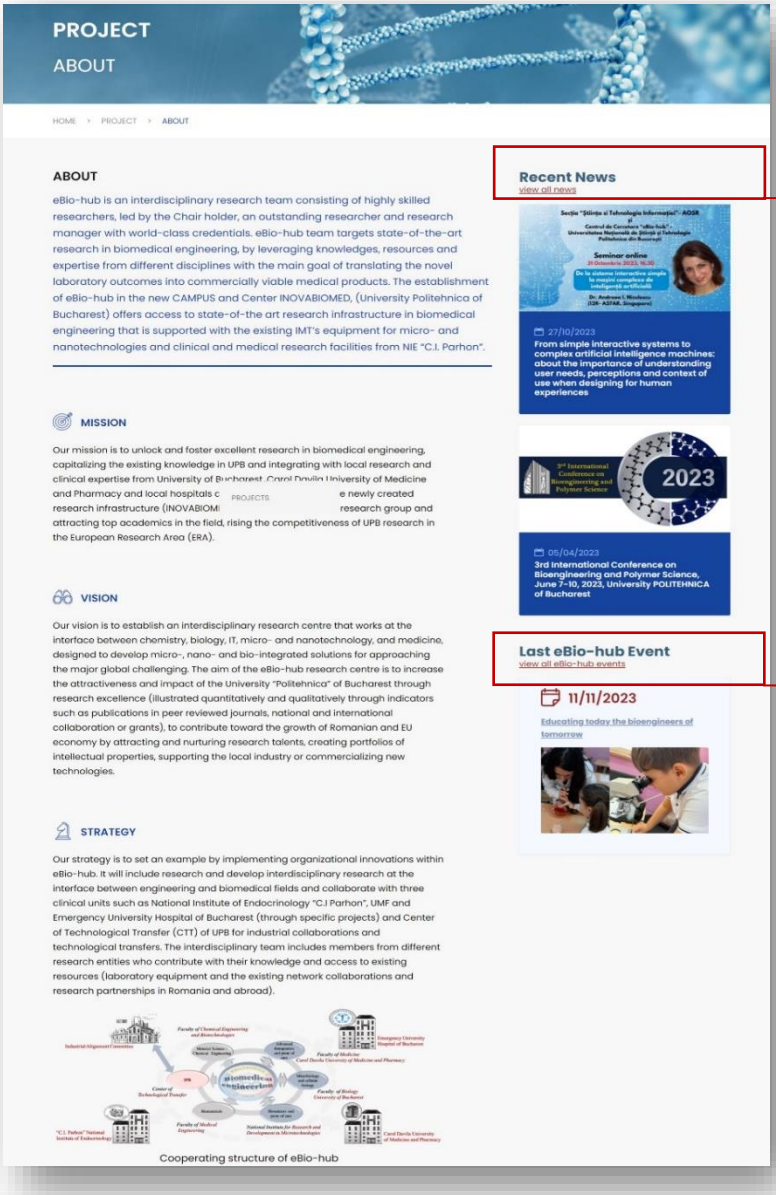
Quality of information — Disclaimer

Integration of social media

Sections and subsections of the project



Header part



Highlighting the latest news

Displaying the latest events

Footer part

PROJECT

DESCRIPTION

HOME > PROJECT > DESCRIPTION

DESCRIPTION

GENERAL OBJECTIVE

eBio-hub will prepare a long-term science and innovation strategy to advance the research and applications in biomedical field as well as to be a start-up platform for med-tech companies. This strategy will be based on the vision of creating a biomedical research hub at UPB.

SPECIFIC OBJECTIVES

- To position eBio-hub as a strategic research nucleus that combines multiple scientific excellence (biophysics, biomaterials, microfluidics, biosensing, chemistry, materials, microbiology and medicine) to become a leading biomedical research centre in the region, with in increasing collaboration within UPB, between Romanian research institutes and universities, and EU countries.
- To create a competitive interdisciplinary team by attracting, training and maintain high quality human resources (national and international) on a sustainable basis, created on open, transparent and merit-based recruitment process.
- To establish eBio-hub-as a centre with an extensive knowledge transfer in postgraduate studies at UPB that supports, through the ERA Chair the setup of a PhD program in biomedical engineering in UPB.
- To set a best practice example that will induce structural changes in UPB or on a larger scale (i.e., being a platform for future start-ups, promoting gender equality and diversity in science, strengthening the mobility of researchers and the flow of knowledge, promoting interdisciplinary PhD program).
- To better use the existing state-of-the-art infrastructure from UPB and integrate it with the research capabilities from other research entities from Bucharest.

WORK PLAN

The eBio-hub's Work Plan is designed based on the project objectives, according to ERA strategy, and is structured into 7 work packages, which are organised in an orderly and quantifiable way, to diminish the risks and increase the efficiency.

Recent News

view all news

27/10/2023

From simple interactive systems to complex artificial intelligence machines: about the importance of understanding user needs, perceptions and context of use when designing for human experiences

05/04/2023

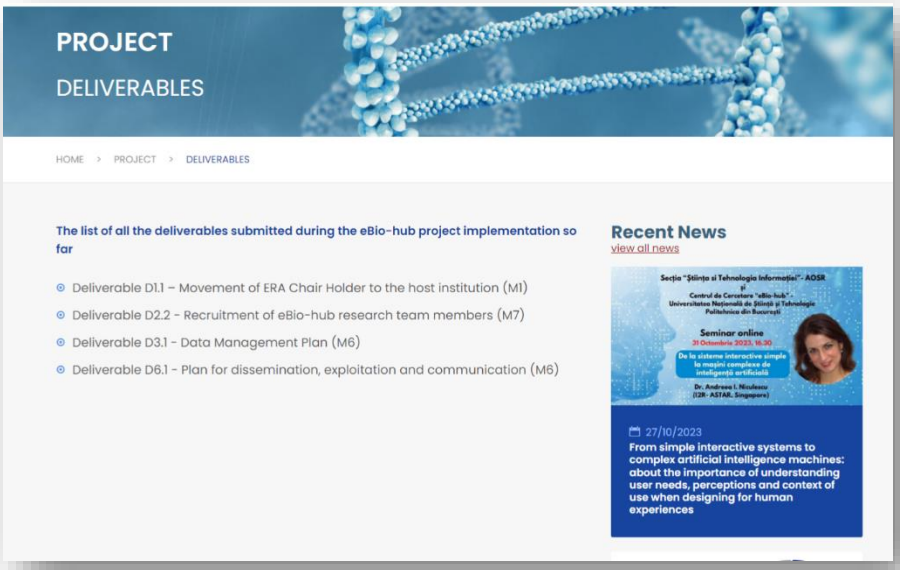
3rd International Conference on Bioengineering and Polymer Science, June 7-10, 2023, University POLITEHNICA of Bucharest

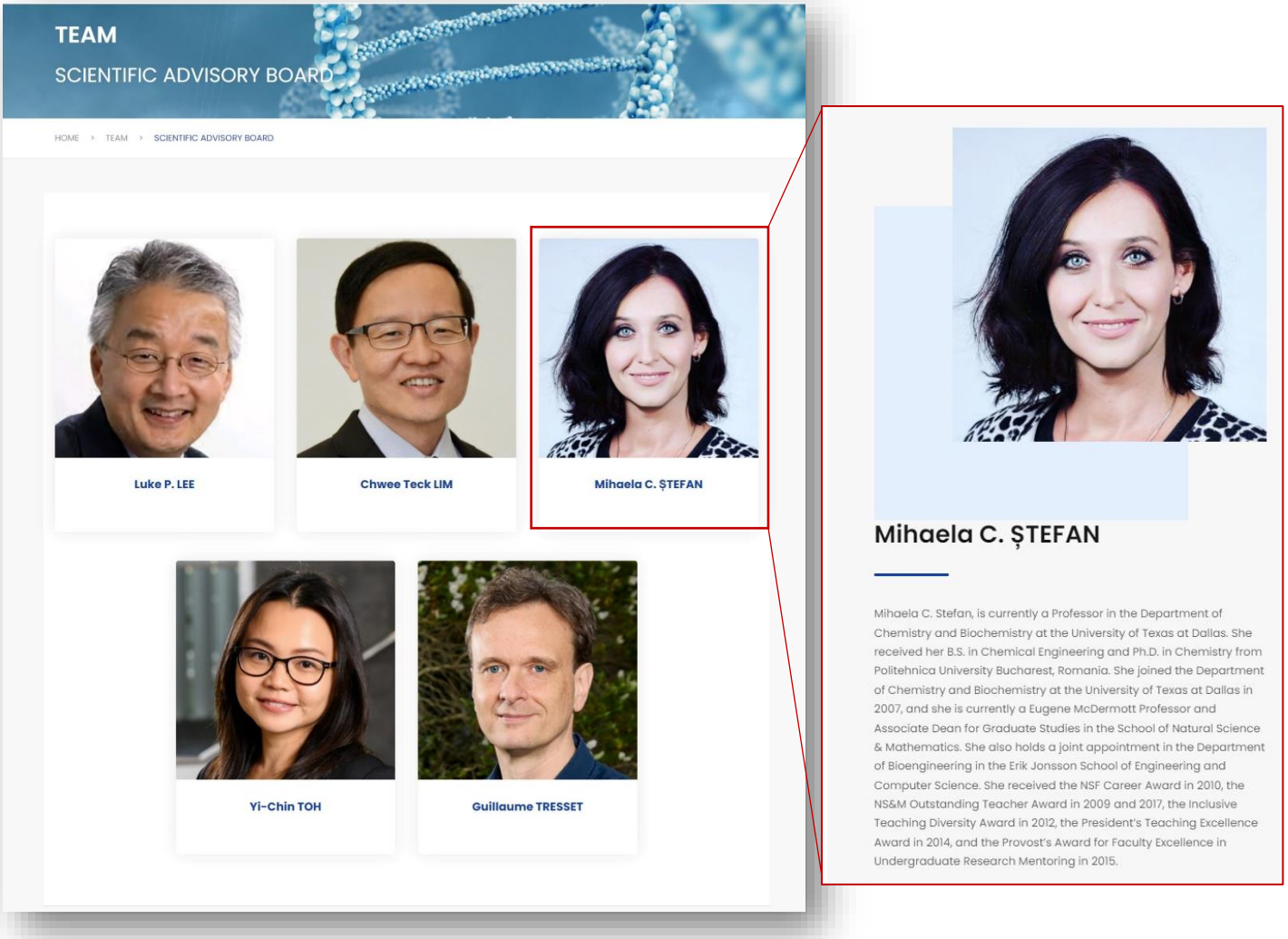
Last eBio-hub Event

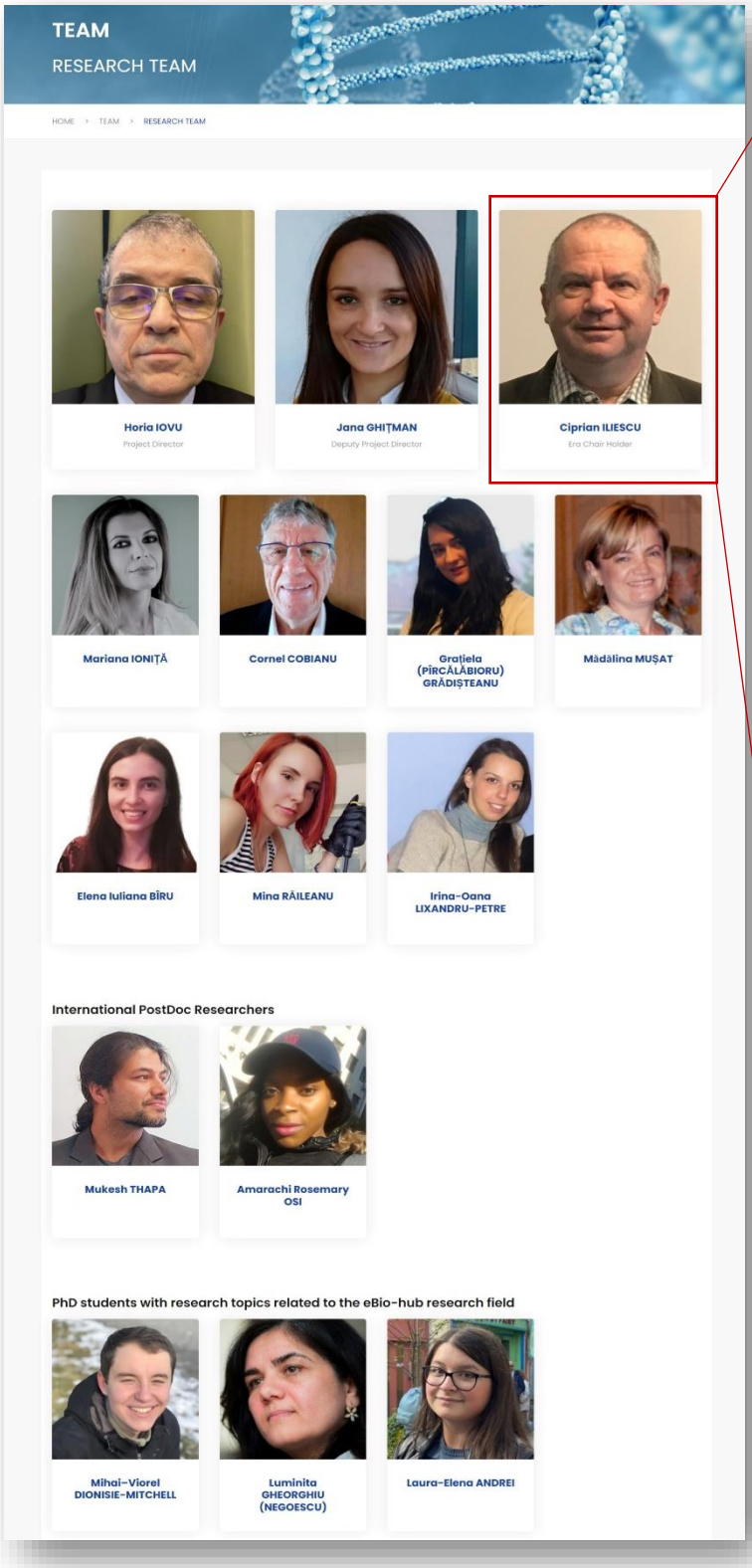
view all eBio-hub events

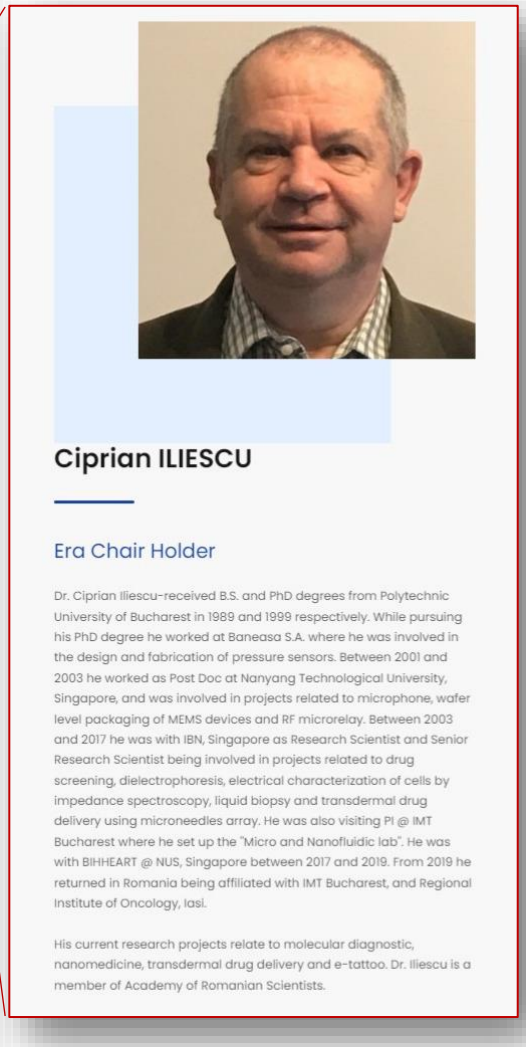
11/11/2023

Educating today the bioengineers of tomorrow


PROJECT
DELIVERABLES
HOME > PROJECT > DELIVERABLES
The list of all the deliverables submitted during the eBio-hub project implementation so far
Deliverable D1.1 – Movement of ERA Chair Holder to the host institution (M1)
Deliverable D2.2 - Recruitment of eBio-hub research team members (M7)
Deliverable D3.1 - Data Management Plan (M6)
Deliverable D6.1 - Plan for dissemination, exploitation and communication (M6)
Recent News
view all news
Seminar online
27/10/2023
From simple interactive systems to complex artificial intelligence machines: about the importance of understanding user needs, perceptions and context of use when designing for human experiences


TEAM
SCIENTIFIC ADVISORY BOARD
HOME > TEAM > SCIENTIFIC ADVISORY BOARD
Luke P. LEE
Chwee Teck LIM
Mihaela C. ȘTEFAN
Yi-Chin TOH
Guillaume TRESSET
Mihaela C. ȘTEFAN
Mihaela C. Stefan, is currently a Professor in the Department of Chemistry and Biochemistry at the University of Texas at Dallas. She received her B.S. in Chemical Engineering and Ph.D. in Chemistry from Politehnica University Bucharest, Romania. She joined the Department of Chemistry and Biochemistry at the University of Texas at Dallas in 2007, and she is currently a Eugene McDermott Professor and Associate Dean for Graduate Studies in the School of Natural Science & Mathematics. She also holds a joint appointment in the Department of Bioengineering in the Erik Jonsson School of Engineering and Computer Science. She received the NSF Career Award in 2010, the NS&M Outstanding Teacher Award in 2009 and 2017, the Inclusive Teaching Diversity Award in 2012, the President's Teaching Excellence Award in 2014, and the Provost's Award for Faculty Excellence in Undergraduate Research Mentoring in 2015.


TEAM
RESEARCH TEAM
HOME > TEAM > RESEARCH TEAM
Horia IOVU
Project Director
Jana GHIȚMAN
Deputy Project Director
Ciprian ILIESCU
Era Chair Holder
Mariana IONIȚĂ
Cornel COBIANU
Grațiela (PÎRCĂLĂBIORU) GRĂDIȘTEANU
Mădălina MUȘAT
Elena Iuliana BÎRU
Mina RĂILEANU
Irina-Oana LIXANDRU-PETRE
International PostDoc Researchers
Mukesh THAPA
Amarachi Rosemary OSI
PhD students with research topics related to the eBio-hub research field
Mihai-Viorel DIONISIE-MITCHELL
Luminita GHEORGHIU (NEGOESCU)
Laura-Elena ANDREI


Ciprian ILIESCU
Era Chair Holder
Dr. Ciprian Iliescu-received B.S. and PhD degrees from Polytechnic University of Bucharest in 1989 and 1999 respectively. While pursuing his PhD degree he worked at Baneasa S.A. where he was involved in the design and fabrication of pressure sensors. Between 2001 and 2003 he worked as Post Doc at Nanyang Technological University, Singapore, and was involved in projects related to microphone, wafer level packaging of MEMS devices and RF microrelay. Between 2003 and 2017 he was with IBN, Singapore as Research Scientist and Senior Research Scientist being involved in projects related to drug screening, dielectrophoresis, electrical characterization of cells by impedance spectroscopy, liquid biopsy and transdermal drug delivery using microneedles array. He was also visiting PI @ IMT Bucharest where he set up the "Micro and Nanofluidic lab". He was with BIHHEART @ NUS, Singapore between 2017 and 2019. From 2019 he returned in Romania being affiliated with IMT Bucharest, and Regional Institute of Oncology, Iasi.
His current research projects relate to molecular diagnostic, nanomedicine, transdermal drug delivery and e-tattoo. Dr. Iliescu is a member of Academy of Romanian Scientists.


RESEARCH
DIRECTIONS
HOME > RESEARCH > DIRECTIONS
DIRECTIONS
eBio-hub research topics cover an extensive area, which are focused on four main research directions, in line with the Horizon Europe missions, as presented in the diagram.
Transdermal co-delivery systems
Material Science
Point of care
Drug delivery and drug screening
Biosensors
Chemical Engineering
Nanomedicine
Molecular diagnostics
Transdermal drug delivery
e-Skin/e-tattoo
Advanced therapeutics
Microbiology and cellular biology
Intelligent carriers for efficient genome editing
eBio-hub team foresee to contribute to the development of (1) Molecular diagnostics field through designing, developing and validating patient-tailored interventions and therapeutics, molecular diagnostic tests and assays in the field of infectious disease, endocrinology and cancer (e.g., POC, biosensors, engineering solutions for microbiome studies, etc.,); (2) Nanomedicine field by finding and developing new and intelligent laboratory solutions that may contribute to the advancement of safe, efficient and personalized anticancer therapies, capable to tackle the main challenges faced in academia and clinical practice in cancers management (e.g., biomimetic nanocarriers, intelligent systems for efficient genome editing, transdermal co-delivery systems, etc.,); (3) Transdermal drug delivery field by creating smart devices to support personalized and precision medicine at the point of care, and widening the range of possible treatments and other patient's needs beyond vaccination (e.g., microneedles approach, POC testing solutions, etc.,); (4) e-Skin/e-Tattoo field through developing new solutions for active monitoring of health conditions (diagnostic) for therapeutic and preventive approaches, capable to overcome the problems associated with blood sample collection and provide higher compliance among various users (e.g., athletes, patients).
Recent News
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Seminar online
27/10/2023
From simple interactive systems to complex artificial intelligence machines: about the importance of understanding user needs, perceptions and context of use when designing for human experiences
2023
05/04/2023
3rd International Conference on Bioengineering and Polymer Science, June 7-10, 2023, University POLITEHNICA of Bucharest
Last eBio-hub Event
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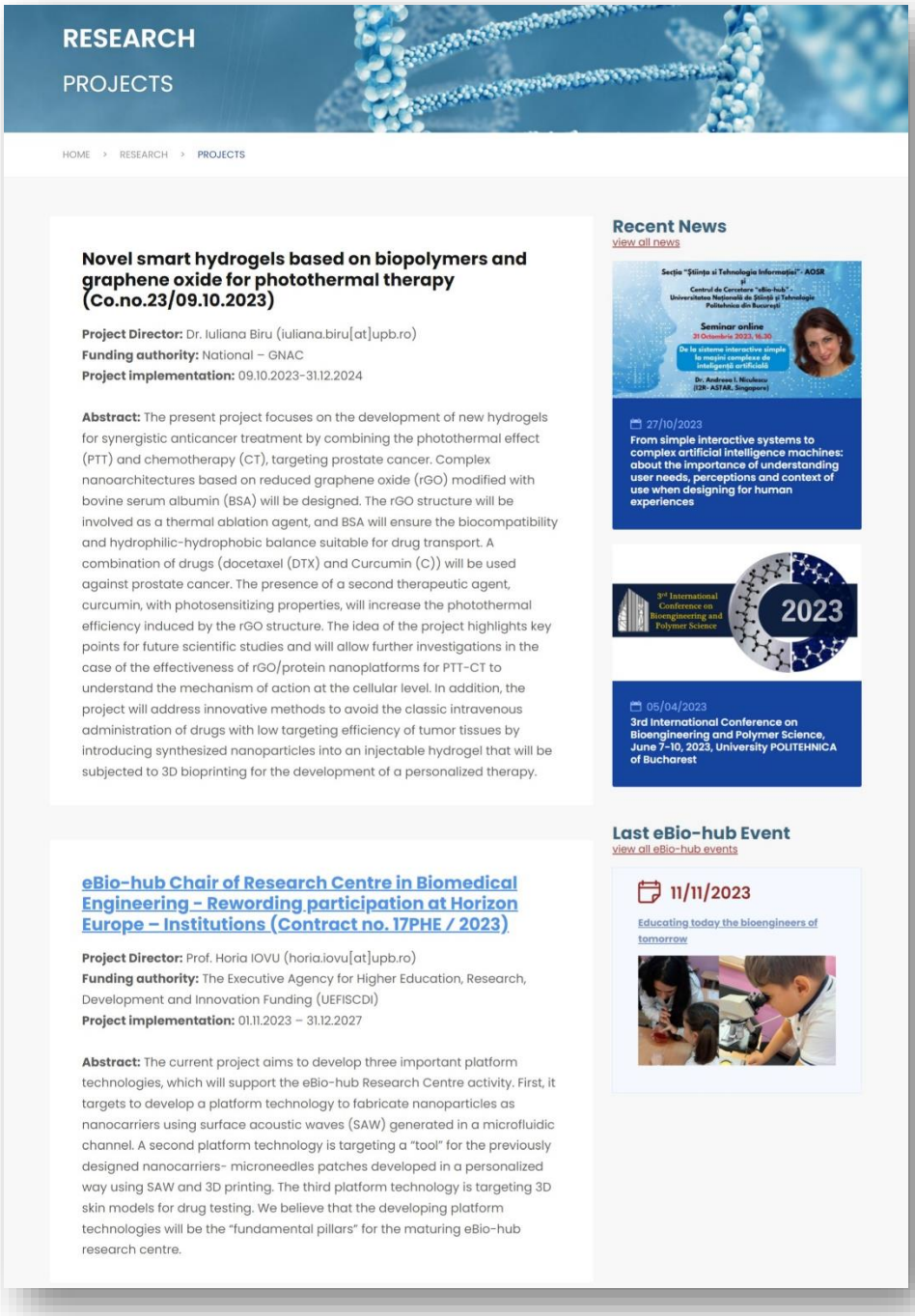
Content will be updated with the information


RESEARCH
PROJECTS
HOME > RESEARCH > PROJECTS
Novel smart hydrogels based on biopolymers and graphene oxide for photothermal therapy (Co.no.23/09.10.2023)
Project Director: Dr. Iuliana Biru (iuliana.biru[at]upb.ro)
Funding authority: National – GNAC
Project implementation: 09.10.2023-31.12.2024
Abstract: The present project focuses on the development of new hydrogels for synergistic anticancer treatment by combining the photothermal effect (PTT) and chemotherapy (CT), targeting prostate cancer. Complex nanoarchitectures based on reduced graphene oxide (rGO) modified with bovine serum albumin (BSA) will be designed. The rGO structure will be involved as a thermal ablation agent, and BSA will ensure the biocompatibility and hydrophilic-hydrophobic balance suitable for drug transport. A combination of drugs (docetaxel (DTX) and Curcumin (C)) will be used against prostate cancer. The presence of a second therapeutic agent, curcumin, with photosensitizing properties, will increase the photothermal efficiency induced by the rGO structure. The idea of the project highlights key points for future scientific studies and will allow further investigations in the case of the effectiveness of rGO/protein nanoplatforms for PTT-CT to understand the mechanism of action at the cellular level. In addition, the project will address innovative methods to avoid the classic intravenous administration of drugs with low targeting efficiency of tumor tissues by introducing synthesized nanoparticles into an injectable hydrogel that will be subjected to 3D bioprinting for the development of a personalized therapy.
eBio-hub Chair of Research Centre in Biomedical Engineering - Rewording participation at Horizon Europe – Institutions (Contract no. 17PHE / 2023)
Project Director: Prof. Horia IOVU (horia.iovu[at]upb.ro)
Funding authority: The Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI)
Project implementation: 01.11.2023 – 31.12.2027
Abstract: The current project aims to develop three important platform technologies, which will support the eBio-hub Research Centre activity. First, it targets to develop a platform technology to fabricate nanoparticles as nanocarriers using surface acoustic waves (SAW) generated in a microfluidic channel. A second platform technology is targeting a "tool" for the previously designed nanocarriers- microneedles patches developed in a personalized way using SAW and 3D printing. The third platform technology is targeting 3D skin models for drug testing. We believe that the developing platform technologies will be the "fundamental pillars" for the maturing eBio-hub research centre.
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05/04/2023
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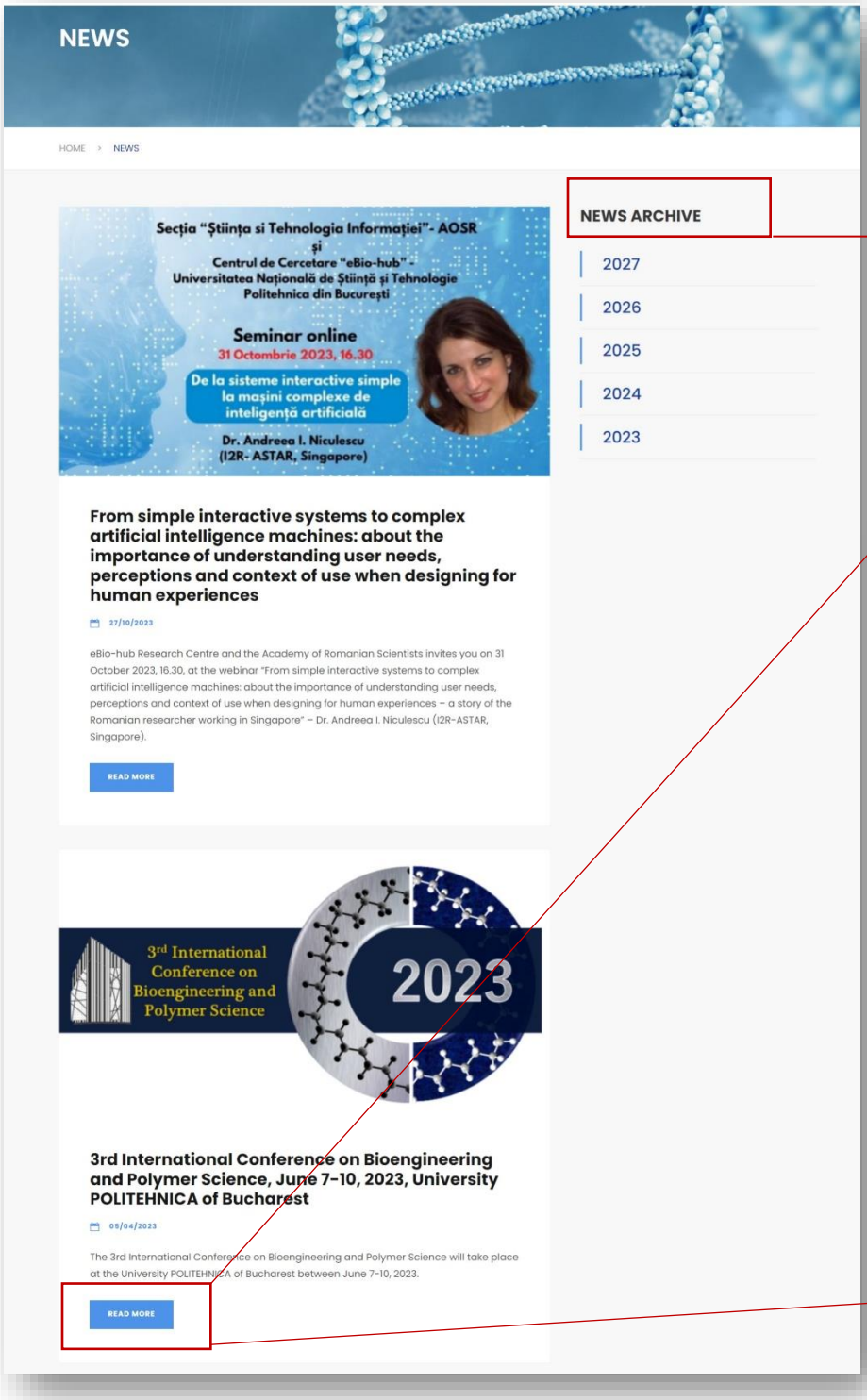
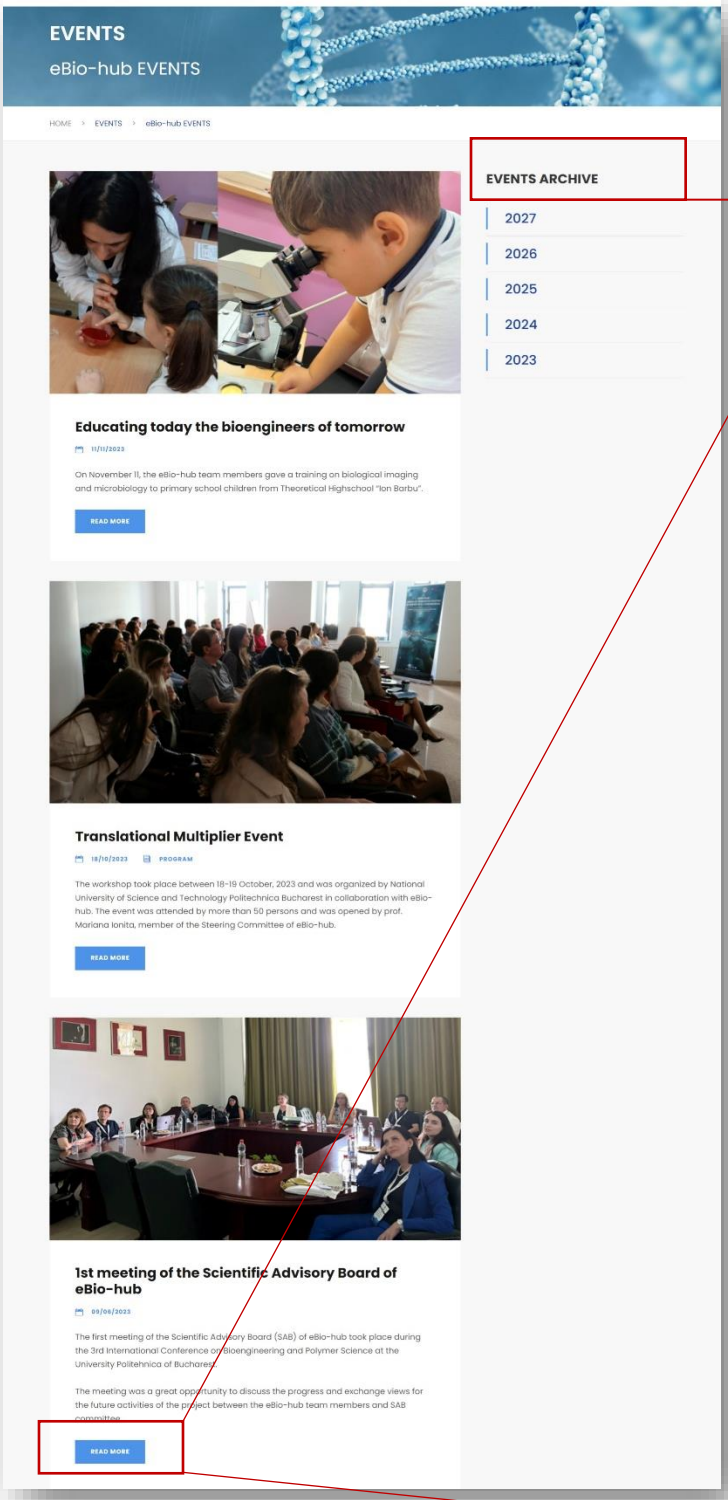
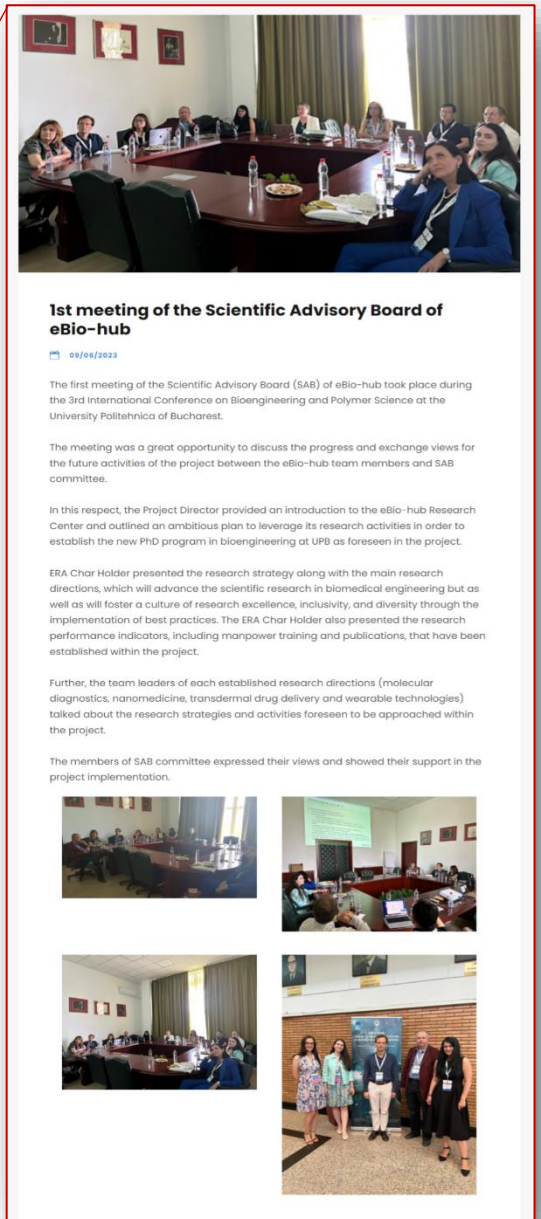
Educating today the bioengineers of tomorrow



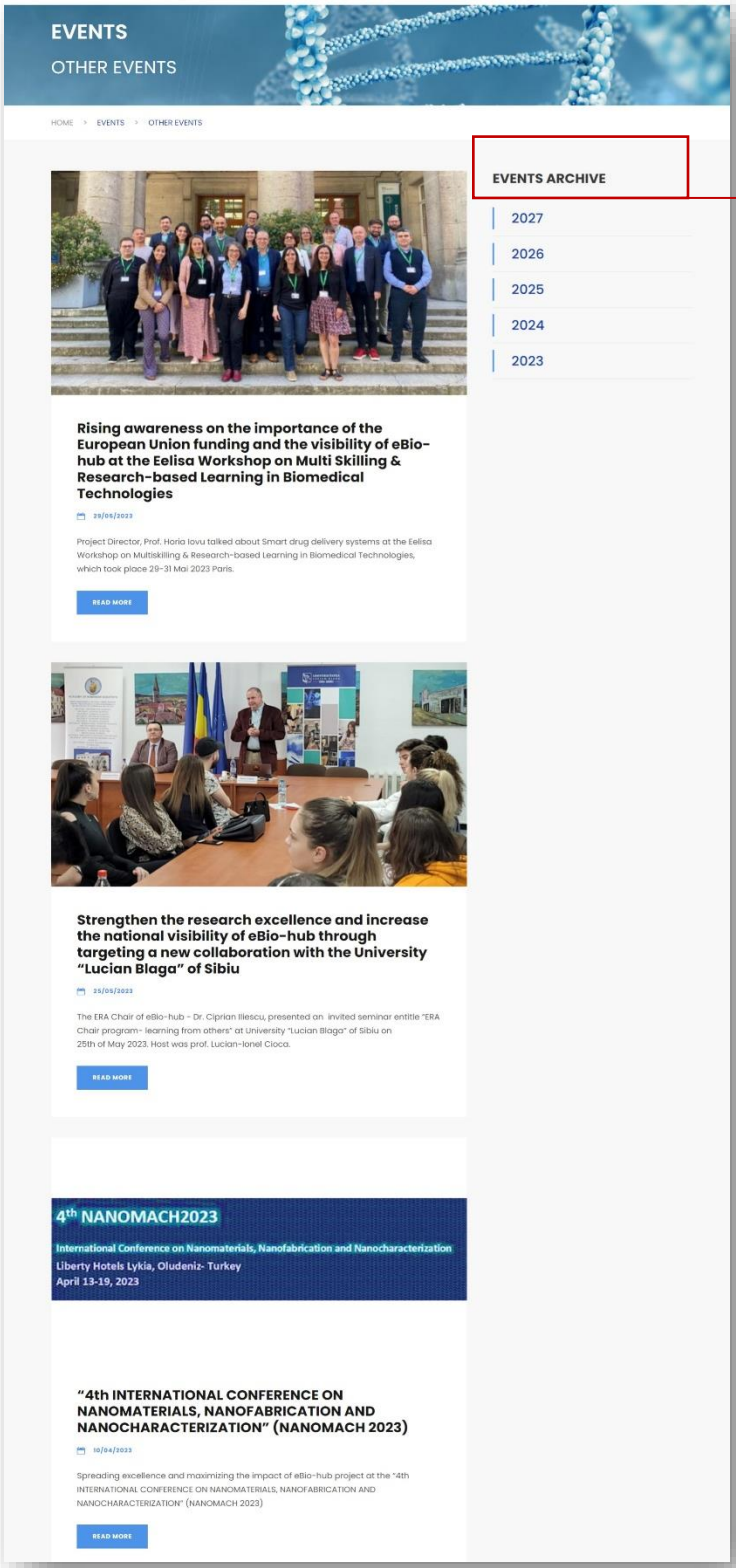
Archive of the news



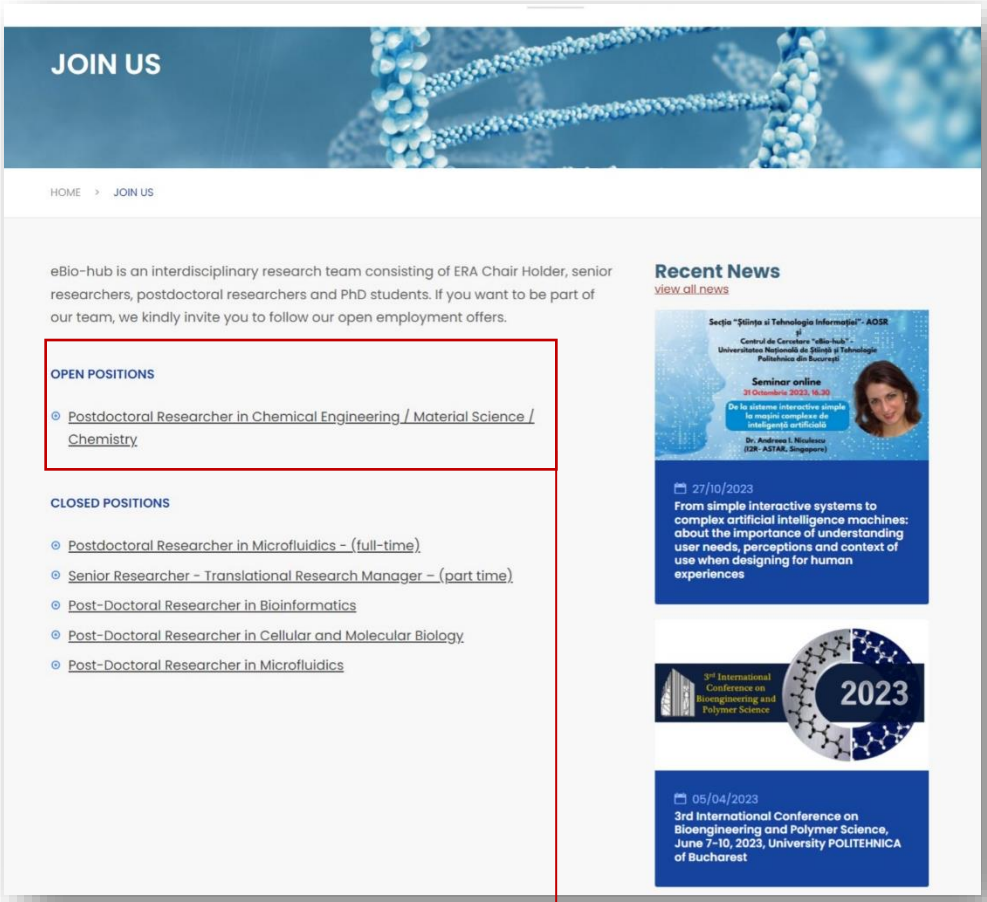
Archive of the events



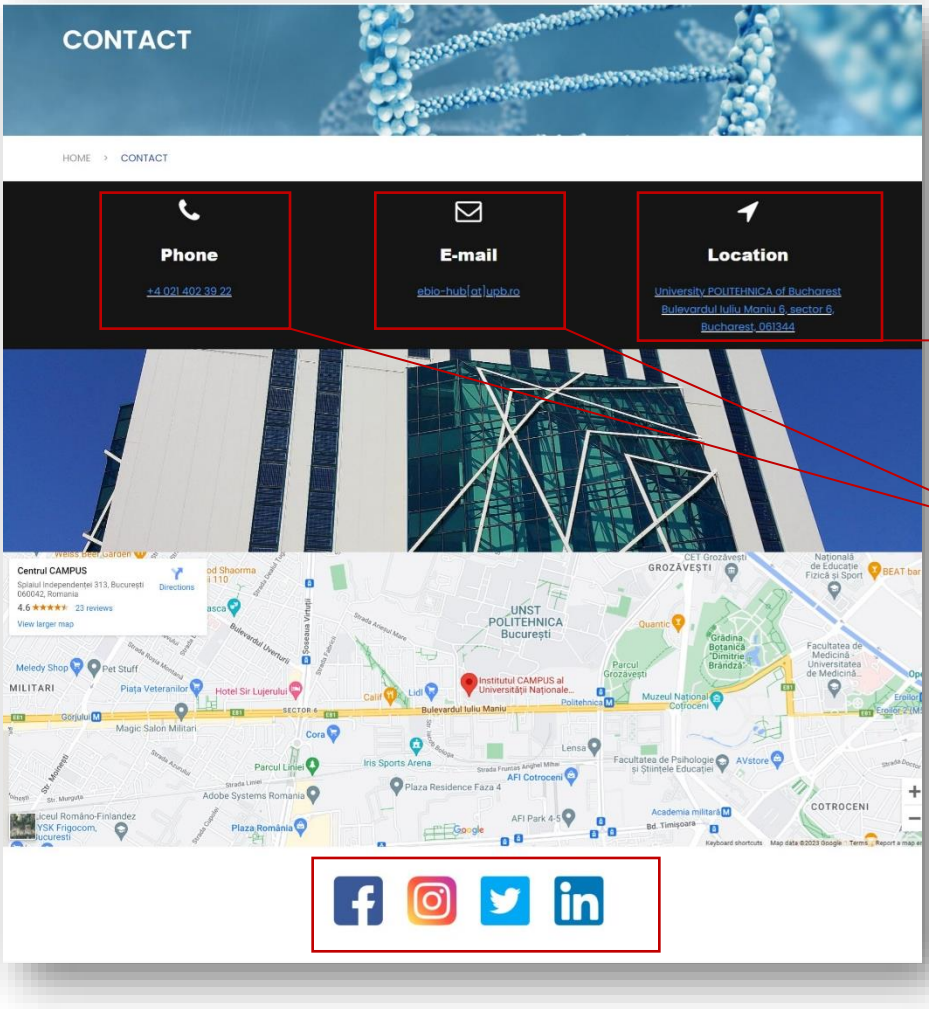
Events are presented in chronological order



Archive of the events



Dedicated space for advertising open positions



*Address of **eBio-hub** Center*

Contact methods

Link with social media