

## CURRICULUM VITAE

CSI Associate Professor Dr. Ana-Maria ENCIU



### PERSONAL INFORMATION

Born in 1978, Romanian citizen, current residence: Bucharest, Romania

### PROFESSIONAL PROFILE

#### Academic and Social Media Profiles:

Web of Science ResearcherID: F-4964-2013

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#### Current professional positions

**2022 – Present** - Associate Professor Carol Davila University of Medicine and Pharmacy, Bucharest, Department: Morphological Sciences (Preclinical 2), Discipline: Cellular, Molecular Biology and Histology

**2024-Present** - Scientific Researcher Grade I (CS I) Victor Babeş National Institute of Research and Development (INCD), Bucharest, Laboratory: Biochemistry-Proteomics

**2023-2026** – Scientific Secretary Victor Babeş National Research and Development Institute (INCD)

#### Previous professional positions:

##### UMFCD

2003 – 2022 – Professional stages in higher education (Teaching Assistant, Assistant Professor, Senior Lecturer) – Carol Davila University of Medicine and Pharmacy, Bucharest, Department of Cellular and Molecular Biology.

##### INCDVB

2010 – 2024 – Progression through the professional stages in research, from research assistant to grade II scientific researcher.

##### Others

2024-2025 – Interim Scientific Director, Institute for Research and Development in Genomics

2013 – Present – M.D. in Geriatrics - Gerontology

### EDUCATION AND TRAINING

My professional profile is defined by an interdisciplinary, academic and fundamental research trajectory in the field of Health. Basic training in General Medicine (UMF "Carol Davila", 2003) was extended by specialising in Geriatrics and Gerontology (2012) and by achieving the highest degree of academic expertise: **Doctorate in Medicine** (PhD, 2012). The doctoral research, focused on

"Molecular mechanisms in neurodegeneration", under the coordination of Prof. Dr. Ștefan Constantinescu, was further developed through a postdoctoral internship (2014-2015) dedicated to research excellence and capitalised on by winning and coordinating a fundamental research project in the field of pathological mechanisms in Alzheimer's disease (2015-2017 – PN II-RU-TE-2014-4-1531 "Before Alzheimer's disease: a new signalling mechanism of the amyloid precursor protein in the healthy adult brain").

The medical skills are complemented by a background in economics and administration, with a bachelor's degree in International Economic Relations (2002) and a **master's degree in Management and Public Administration** (2007). This hybrid expertise is complemented by certification as a **certified trainer** (2013) and **specific skills in Technology Transfer** (course completed in 2017), thus facilitating the integration of fundamental research results into complex operational and educational flows.

## RESEARCH ACHIEVEMENTS AND PROFESSIONAL RECOGNITION

### RESEARCH ACHIEVEMENTS

Research activity focuses on the molecular mechanisms involved in tumorigenesis, chronic inflammation, cellular interactions within the tumor microenvironment, and the role of scavenger receptors (especially CD36) in these processes.

In recent years, the research has also integrated innovative experimental models, including Crispr/Cas9 gene editing and testing of biomaterials and bioactive hydrogels for regenerative applications. Recent publications demonstrate an expansion of expertise into nanomaterials and biohybrid systems with therapeutic potential. The results of CDI activity in fundamental, preclinical research in the strategic field of Health can be structured in three directions:

#### *1. Demonstration of the role of CD36 in inflammation, neurodegeneration and cancer*

**Projects:** PNIII-PED-3141 (PI consortium), PN 23.16.02.03 (2023-2026), ROGEN-Project Code: 324809 (2024-2029) (member of the implementation team) - CD36-knockout and CRISPR/Cas9 experimental models in oncology, such as CD36<sup>-/-</sup> cell models that allowed the analysis of morphological and proliferative changes in tumours.

**Original articles:** Cell Mol Biol (Noisy-le-grand), 2023 [10.14715/cmb/2023.69.3.15](https://doi.org/10.14715/cmb/2023.69.3.15), Metabolites 2022 [10.3390/metabo12040329](https://doi.org/10.3390/metabo12040329), Frontiers in Pharmacology 2021 [10.3389/fphar.2021.737571](https://doi.org/10.3389/fphar.2021.737571) – which show the tissue specificity of the CD36 receptor blockade response, sometimes antagonistic, which may explain its yet unexploited therapeutic value.

#### *2. Technology for enriching metastatic tumour cells from blood, based on CD36 detection*

**Project:** PNIII-PED-3141 (PI consortium) – development of a combined immunocapture approach based on CD36 nanostructures for the enrichment of circulating tumour cells. Although CD36 has not been proven to be an exclusive marker, the results have provided critical data for the

optimisation of cell isolation strategies. This project funded the start of CD36 gene editing and a training internship in the field for the PhD student employed in the project.

**Original articles:** Micromachines (Basel) 2022 [10.3390/mi13101671](https://doi.org/10.3390/mi13101671), Materials Today Communications 2022 <https://doi.org/10.1016/j.mtcomm.2022.104016>.

### *3. Development of new materials with medical applications*

**Projects:** POC-G INTELBIOMED Contract no. 52/05.09.2016 ID: P\_40\_197 SMIS code:105631(2016-2022); PTI-NOVATERA, Financing contract: No. 438/390114/17.02.2023

**Original articles** (selection): Gels 2022 [10.3390/gels8100604](https://doi.org/10.3390/gels8100604), Gels 2023 [10.3390/gels9060476](https://doi.org/10.3390/gels9060476), Pharmaceutics 2023 [10.3390/pharmaceutics15122696](https://doi.org/10.3390/pharmaceutics15122696), Pharmaceutics (Basel), 2025 doi:[10.3390/ph18020212](https://doi.org/10.3390/ph18020212). These articles have contributed to the advancement of the field by developing smart biohybrid systems that integrate green synthesis and phytochemicals into optimised polymermatrices, transforming hydrogels from simple protective barriers into bioactive platforms capable of stimulating cell regeneration and precisely controlling the release of therapeutic agents.

## **PROFESSIONAL RECOGNITION**

As a young researcher, I had the honour of receiving the IOAN MORARU **award** in 2015 from the Romanian Society of Immunology. Subsequently, the results of my research were recognised by the scientific community through the awarding of **prizes** (8 gold medals, 4 silver medals, 2 diplomas of excellence) at events dedicated to invention and technology transfer, such as the "PROINVENT" Salon in Cluj, "INFOINVENT" Chişinău, "TRAIAN VUIA" in Timişoara and "EURO POLITEHNICUS" in Bucharest. The awards were granted for the patents obtained (RO130589/B1, RO133249/A2) or projects with an innovation and technology transfer component, to which I contributed either as coordinator (TE101/2015) or as a member of the implementation team (POC-G Intelbiomed, PTI-Novatera).

In addition, I am a **member appointed by vote** of the Scientific Council of INCD Victor Babeş (in 2022 and again in 2026) and of the Department Council of the Preclinical Department 2 Morphological Sciences within UMF Carol Davila Bucharest.

## **OTHER INFORMATION**

H-index: 24 (Web of science), based on 74 ISI publications, cited over 2000 times.

Patents granted: 2 - RO130589/B1, RO133249/A2

Patent applications (under evaluation): 3

**TECHNOLOGY TRANSFER ACTIVITIES** to the private sector for the validation of products and services in the fields of medical biotechnology and health.

Within the POC-G INTELBIOMED project Contract no. 52/2016, I directly coordinated two subsidiary contracts with SMEs (subsidiary contract 928 with DDS Diagnostic and 663 with Cromatec Plus), which resulted in joint publications, in public-private partnership, patent requests

and continued collaboration through the submission of new PED, PTI and PTE projects. In this context, one of the responsibilities taken on at INCD Victor Babeş in 2024 was to make operational the Technology Transfer Centre, resulted from the expertise gained in the POC-G Intelbiomed project.

### **MENTORING and training of young researchers**

An activity undertaken constantly is the training of young researchers, selected from medical students with outstanding results. Since 2013, I have invested time in the practical training of students, either through summer internships, in collaboration with UMF Carol Davila, or their voluntary involvement in research projects carried out in the INCD Victor Babeş Biochemistry-Proteomics laboratory. I am also using specific tools of training, such as workshops (Basic Research Skills, Qubicle, Mentoring in Cell Biology – organised annually since 2015, in collaboration with the Scientific Organisation of Medical Students (SOMS)) or summer schools (coordinator of activities within the Holiday School programme, run at INCD Victor Babeş between 2021 and 2025). Some of these students chose to pursue their bachelor theses under my supervision, and three of them continued their professional training through a PhD in Medicine and were hired as young researchers in projects implemented at INCD Victor Babeş.

### **Social Media Communication**

During the COVID pandemic, I was the **e-learning responsible** for the Cell Biology and Histology Department, time during which I learned a lot about the digitisation of the learning process. To date, I am continuing to use and expand these skills to other platforms (Moodle). As the Scientific Secretary of INCD Victor Babeş, I created social media accounts for the institute (LinkedIn, Facebook and Instagram) and I **create and post content** related to the institute's activity. Since January 2026, I have been appointed as the communication manager for INCD Victor Babeş in the Rogen project.