



Candidate Description

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BASIC AND SCIENTIFIC DATA

- **Full name:** Monica Florescu
- **Citizenship:** Romanian
- **Position:** Associate Professor
- **Email:** florescum@unitbv.ro
- **Department:** Department of Fundamental, Prophylactic and Clinical Disciplines
- **Address:** Str. Universitatii nr 1, Corp C, room CI30
- **Scientific major Field:** Physics
- **Scientific minor Field:** Medicine

EDUCATION

- 1988–1993, Bachelor's/Master's Degree in Physics, University of Bucharest, Romania
- 2000–2002, Postgraduate Specialization, Transylvania University of Brasov, Romania
- 2000–2007, PhD in Physics, University of Bucharest, Romania, "Biophysical Methods for Detecting Active Biological Compounds"
- 2011–2019, Doctor of Medicine, Transylvania University of Brasov, Romania, "Contribution to the Development of Bioinstruments and Their Applications in Medicine"
- 2024, Habilitation in Medicine, Transylvania University of Brasov, Romania, "Innovative Approaches to New Diagnostic and Therapeutic Methods"

EMPLOYMENT HISTORY

- 1994–1998: Physics Teacher
N. Titulescu High School, Brasov
Teaching with students
- 1998–present: Associate Professor, Lecturer, Universitatea Transilvania din Brasov
Teaching in physics and biophysics, Research

SCIENTIFIC INTERESTS AND FUTURE AMBITIONS

The major emphasis of my research has concerned to research interests focus on biophysics, nanotechnology, and their applications in medicine. She places particular emphasis on the development of modern materials and nanostructures for diagnostics and therapy, including biomolecule detection and drug delivery systems. She is also interested in the analysis of biomolecular interactions and the development of innovative research methods in the field of biomedical sciences.

Future ambitions include the further development of innovative diagnostic and therapeutic technologies, particularly those based on bio-nanomaterials and advanced biophysical methods. She strives to strengthen international cooperation and the transfer of technology from scientific research to medical practice. An important goal is also the development of teaching activities and the training of future generations of specialists in the fields of biophysics and biomedical engineering.

In summary, major research interests including:

- modern materials and nanostructures for diagnostics and therapy
- biomolecule detection and drug delivery systems

SCIENTIFIC ACHIEVEMENTS

1. PROJECTS:

- Coordination of 10 research projects, both as a director (6) and as a representative of Transilvania University of Brasov
- Management Committee Responsible for Romania to COST Action CA15126 (Between Atom and Cell: Integrating Molecular Biophysics Approaches for Biology and Healthcare (MOBIEU)).

2. PUBLICATIONS:

86 articles:

- 57 articles and abstracts published in highly rated peer-reviewed journals,
 - 2 articles published extenso in international ISI conferences proceedings,
 - 16 articles published in BDI-rated journals,
 - 11 articles in international conferences proceedings.
- 30 books / chapters of books
- 10 as authors in international publishing houses and
 - 9 in national publishing houses, 11 as editor in national publishing houses)

3. SCIENTIFIC SUPERVISION:

- 2025: Project Manager (Accredited Course), Bucharest, Romania
- 2022: VI Online e-learning seminar for university professors, The Catholic University of Ávila, Spain
- 2022: Innovation Labs program, University research spin-off for effective technology transfer, Bucharest, Romania.
- 2017: Training program “Developing academic abilities of teaching staff - Conditions of academic success”. Transilvania University of Brasov, Romania.
- 2015: Short-Term Scientific Mission, COST TD 1104 Action - EP4Bio2Med, European network for development of electroporation based technologies and

treatments. Universiteit Twente, Institute for Nanotechnology (MESA+), Microfluidics for nanomedicine.

- 2012: International Course "Electroporation for Medicine: „Basic Knowledge, Applications and Technologies" Carol Davila University of Medicine, Bucharest, Romanian Society of Pure and Applied Biophysics. October 25-27, 2012.

4. SUBMITTED PATENTS:

- M. Florescu, M. David, A. Serban, "Process for electrochemical determination of the total antioxidant capacity of water-soluble vegetal extracts using a portable electrochemical platform with gold nanoparticles". Awarded Patent No. RO 133102 B1 / 30.01.2024 (OSIM)
- M. Florescu, M. David, A. Serban, "Nanostructured electrochemical sensory platform, platform calibration method and method of use for portable, sensitive and selective detection of thyroxine content". National patent application RO135256 (A0).
- M. David, M. Florescu, "Colloidal solution of gold nanoparticles and biological synthesis process ". National patent application RO137580 (A0).
- M. Volmer, M. David, M. Florescu, A. Bezerghianu, C.L. Muşuroi, „ Process for controlling magnetic anisotropy in soft ferromagnetic thin films". National patent application RO138724 (A0).

5. SCIENTIFIC AWARENESS ACTIVITY:

Main organiser of scientific events (conferences, workshops, etc.)

- International Conference on Analytical Methods and Nanoanalytical for Biomedical and Environmental Sciences "IC- ANMBES 2024", "IC- ANMBES 2022", "IC- ANMBES 2018", "IC- ANMBES 2016", "IC- ANMBES 2014", "IC- ANMBES 2012", "IC-ANMBES 2010", Co-President, Member of International Scientific Committee.
- Summer schools organization

6. SCIENTIFIC EDITING AND REVIEWING ACTIVITY

Member of editorial board of peer-reviewed journals

- Biophysical Reviews
- Frontiers in Molecular Biosciences
- Journal of Clinical Medicine
- Analytical Letters
- Medicines

Editing activity for peer reviewed journals

- Guest Editors for journals: Biophysical Reviews, Frontiers In Molecular Biosciences, Bioelectrochemistry, Analytical Letters, Bioelectrochemistry.

Peer-reviewer activity

- Scientific journals (ISI Clarivate)
- National and international projects: • PNIII/IV - UEFISCDI, Romania, • M-ERA.NET, EU and Romania • FWO, Belgium

7. SCIENTIFIC MEMBERSHIPS

- member of:
 - International Union for Pure and Applied Biophysics (IUPAB)(councilor 2024-2027),
 - European Biophysical Societies Association (EBSA),
 - Biophysical Society,
 - Bioelectrochemical Society
 - Romanian Society of Pure and Applied Biophysics (Secretary General since 2019) (vice-president since 2022)
 - Romanian Society of Physics

8. HONORS AND AWARDS

- 2022: The best poster, 5th International Symposium on Nanoparticles, Nanomaterials and Applications, ISN2A 2022, Caparica, Portugal
- 2019: Biophysical Society Travel Award for 63rd Annual Meeting, March, 2019, Baltimore, USA.
- 2015: Short-Term Scientific Mission, COST TD 1104 Action - EP4Bio2Med, Institute for Nanotechnology (MESA+), University of Twente, The Netherlands,
- 2012: Research Internship: Nanoscale Integration Lab, University of Texas-Dallas, USA2005-2006: PhD Research Internship at "University of Coimbra", Coimbra, Portugal,
- 2002-2003: Erasmus PhD Scholarship at "University of Coimbra", Coimbra, Portugal.
- 2002: PhD Short-term scholarship DAAD (German Academic Exchange Service) at "Institut für Chemo- und Biosensorik", Münster, German).

TEACHING EXPERIENCE

- Physics Teacher High School, Brasov
- Lecturer, Universitatea Transilvania din Brasov, Teaching in physics and biophysics

TEACHING AREAS

- ☒ Physics

BIBLIOMETRIC INDEX

- H-index 20
- Number of citations: 1115