CURRICULUM VITAE

PERSONAL DETAILS

Family name, First name: **Manole, Emilia**

Researcher unique identifier(s):

ORCID: https://orcid.org/0000-0001-5954-2611

URL for web site: https://www.ivb.ro/en/cell-biology-home

- **Education and key qualifications**

1998	PhD Faculty of Biology, Comparative Anatomy Dept., University of Bucharest, Romania
1980	Master in Biology Faculty of Biology, University of Bucharest, Romania
1979	Bachelor's degree in Biology Faculty of Biology, University of Bucharest, Romania

- **Current position(s)**

2024 - present	Senior researcher gr. I Team member PN 23.16.01.02, CS I Expert PNRR Project Cell biology, Neurosciences and Experimental myology Laboratory, Victor Babeș National Institute of Pathology Bucharest, Romania
2015 - present	Scientific researcher II, Medical Biologist (part time) Colentina Clinical Hospital, Pathology Dept., Bucharest, Romania

- **Previous position(s)**

2008 - 2024	Scientific researcher gr. II Project coordinator PN 16.22.02.04, Subsidiary contract type D leader _ POC P_40_197, team member in >15 Projects (PN II 42-124/2008, PN II 41-068/2007, PN II 41-068/2007, PN II – PT-PCCA-2013-4-1407/2014, PCCDI 61/2018, PCCDI 65/2018, 7PFE/16.10.2018, 31PFE/2021, Italy-Romania Study, Nucleu Projects etc.), Manager 2 from Romania COST Action BM1207, member of the Management Committee from Romania COST Action CA 17103 , Western blot expert in TDM POSDRU 81/3.2/S/58819 Molecular Biology Laboratory; Cell biology, Neurosciences and Experimental myology Laboratory, Victor Babeș National Institute of Pathology Bucharest, Romania
2008 - 2012	Scientific researcher gr. II Project PN II 42-133/2008 leader Faculty of Biology, University of Bucharest, Romania
2000-2007	Scientific researcher gr. II Project VIASAN 238/2003 leader, Project CEEX 40/2005 leader from Partner1, Project Horizon 2000 (2000-2002) leader Leader of the team of researchers in Neurosciences Laboratory, Colentina Clinical Hospital, Bucharest, Romania
1995 - 2008	Scientific researcher gr. III – gr. II team member in 2 Horizon 2000 Projects, 1 MSA Grant, BIOTECH 425/2002 Project Institute of Medicine and Neurosciences, Neuropathology Dept., Colentina Clinical Hospital, Bucharest, Romania
1982 - 1995	Biologist, Assistant Researcher Experimental Neurophysiology Laboratory, Neuropathology Laboratory, Neurology Dept., Institute of Neurology and Psychiatry, Bucharest, Romania

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Research achievements

My main interest is research on **striated muscle** and **peripheral nerve**, both regarding the experimental study of **regeneration and the pathology** of these tissues in **neuromuscular diseases**. I have attended numerous **courses and specializations** (at least 16) both in the country and abroad (France, USA, Norway, Italy). I have participated in **in vivo and in vitro experimental research** on rodent **audiogenic epilepsy**,

muscle regeneration, **muscle and peripheral nerve pathology** in diabetic neuropathy, Amyotrophic lateral sclerosis, Parkinson's disease (brain-gut axis and brain-muscle axis), **animal behavior**, **brain aging** and in **studies regarding human myopathies and neuropathies** etc. at the Institute of Neurology and Psychiatry, Bucharest; the Institute of Medicine and Neurosciences of Colentina Hospital, Bucharest; the "Victor Babes" Institute of Pathology, Bucharest; INSERM Unit 153, Myology Laboratory and Myology Institute – Paris, France; Baylor College of Medicine - Houston, Texas, USA; European Science Foundation course – Bergen, Norway; Elba International Neuroscience Program – Marina di Campo, Elba, Italy. I also participate in the **laboratory diagnosis of neuromuscular diseases** on muscle and peripheral nerve biopsies at Colentina Clinical Hospital, Department of Pathological Anatomy, Bucharest.

The current interest of the Cell Biology, Neuroscience and Experimental Myology Laboratory team is focused on the study of the **interrelationship between skeletal muscle tissue and the brain in Parkinson's disease**, with the establishment of a panel of circulating muscle biomarkers modified for the **muscle cachexia** that accompanies this pathology, both for the prognosis of the disease and as possible therapeutic targets. I participated in the development of experimental "proof of concept" models in vitro and in vivo, in the identification of molecules that could appear in the event of disruption of the cellular mechanisms underlying the damage to the two tissues, on the brain-muscle axis, in the highlighting of a **panel of muscle myokines**, with an impact on the progression of Parkinson's disease. I also participate in the **laboratory diagnosis of myopathies and neurological diseases** with peripheral nerve involvement on muscle and peripheral nerve biopsies from patients who present for investigations at the Colentina Clinical Hospital. The special cases were the basis for scientific observations and were published or communicated at various congresses and symposiums in the country and abroad.

▪ **Technical expertise:** Western blot, immunohistochemistry, histology, histochemistry and histoenzymology, cells morphometry, cell cultures, processing of biological samples for electron microscopy, development of experimental animal models (rats audiogenic epilepsy, mice diabetic peripheral neuropathy, and mice Parkinson's disease)
▪ **Professional expertise:** cellular and molecular biology studies in neuromuscular diseases, expertise in skeletal muscle and peripheral nerve pathology, optical and electronic microscopy, proteomics studies, research on vivo and in vitro experimental models, development of scientific projects, management of scientific projects. I have participated in a total of 28 research projects, of which I was the project leader in 6. In addition, I have contributed to two research projects abroad, within the framework of my specializations in France (Paris, INSERM Unit 153, Myology Laboratory of Prof. Michel Fardeau, a project on muscular dystrophies) and USA (Houston, Texas, Baylor College of Medicine, Prof. Stanley Appel's Laboratory, a project on amyotrophic lateral sclerosis)

Publications in the skeletal muscle and peripheral nerve pathology topic

- **Emilia Manole**, Laura C. Ceafalan, Gisela F. Gaina, Oana A. Mosoia, Mihai E. Hinescu. Myokine expression in cancer cachexia. In: Cancer research: an interdisciplinary approach. In: Rezaei, N. (eds) Cancer Research: An Interdisciplinary Approach. Interdisciplinary Cancer Research, 2023, vol 1. Springer, Cham. https://doi.org/10.1007/16833_2023_138

- **Manole E.**, Gaina G., Ceafalan L.C., Hinescu M.E. Skeletal Muscle Stem Cells in Aging: Asymmetric/Symmetric Division Switching. *Symmetry*, 2022, 14, 2676. https://doi.org/10.3390/sym14122676

- Gaina G., Vossen R.H., **Manole E.**, Plesca D.A., Ionica, E. Combining Protein Expression and Molecular Data Improves Mutation Characterization of Dystrophinopathies. *Front Neurol*, 2021, 12: 718396. DOI: 10.3389/fneur.2021.718396.

- Vlad Mageriu, **Emilia Manole***, Alexandra E. Bastian, Florica Staniceanu. Role of Myokines in Myositis Pathogenesis and Their Potential to be New Therapeutic Targets in Idiopathic Inflammatory Myopathies. *J Immunol Res*, Volume 2020, Article ID 9079083, 14 pages https://doi.org/10.1155/2020/9079083.

- **Emilia Manole**, Alexandra Eugenia Bastian, Ana Maria Oproiu, Monica Teodora Neagu, Carolina Constantin, Gheorghita Izvoranu. Schwann cell plasticity in peripheral nerve regeneration after injury. In: Demyelination disorders. Cap. 3. Edited by Stavros J. Baloyannis, Fabian H. Rossi and Welwin Liu, 2020, IntechOpen, ISBN: 978-1-83968-654-2, Print ISBN978-1-83968-653-5

- Bastian, AE; Jugulete, G; **Manole, E**; Oprisan, LA, A rare case of mitochondriopathy with autosomal dominant progressive external ophthalmoplegia diagnosed through skeletal muscle biopsy, *Rom J Morphol Embryol*, 2019, 60(1): 273-279.

- **Manole, E**; Ceafalan, LC; Popescu, BO; Dumitru, C; Bastian, AE, Myokines as possible therapeutic

- targets in Cancer Cachexia, *J Immunol Res*, 2018, ID: 8260742, DOI: 10.1155/2018/8260742

- Laura Cristina Ceafalan, **Emilia Manole**, Cristiana Pistol Tanase, Elena Codrici, Simona Mihai, Aldebarani Gonzalez, Bogdan Ovidiu Popescu, Interstitial Outburst of Angiogenic Factors During Skeletal Muscle Regeneration After Acute Mechanical Trauma, *Anatomical Rec*, 2015, 298:1864–1879, DOI: 10.1002/ar.23254

- Popescu LM, **Manole E**, Serboiu CS, Manole CG, Suciu LC, Gherghiceanu M, Popescu BO., Identification of telocytes in skeletal muscle interstitium: implication for muscle regeneration, *J Cell Mol Med*. 2011; 15(6): 1379-92.

- Maria E. Alexianu, **Emilia Manole**, Joseph I. Engelhardt, Stanley H. Appel, Ultrastructural evidence of calcium involvement in experimental autoimmune gray matter disease*, J Neurosci Res*, 2000, 60: 98-105

- F.M.S.Tome, T.Evangelista, A.Leclerc, Y.Sunda, **E.Manole**, B.Estournet, A.Barois, K.P.Campbell, M.Fardeau, Congenital muscular dystrophy with merosin deficiency, *C.R.Acad.Sci.Paris, Sciences de la vie / Life sciences*, 1994, 317: 351 -357

Patent Application A100228/4.05.2022 (OSIM), Hofigal Export import SRL, INCD "Victor Babes". Dietary supplements recommended for alleviating unpleasant symptoms of menopause. Obtaining process and processes for establishing bio-safety and biological efficacy (Suplimente alimentare recomandate pentru atenuarea simptomelor neplacute ale menopauzei. Procedeu de obtinere si procedee de stabilire a bio-sigurantei si eficacitatii biologice). Neagu M., Luntraru C-M, Suciu A, Tomescu J-A, Pop S, **Manole E**, Albulescu L, Tanase C.

Peer recognition

Honors and Awards

- 1995 – **INSERM Award** of the French Academy of Sciences for the work on congenital muscular dystrophy from 1994 (- F.M.S.Tome, T.Evangelista, A.Leclerc, Y.Sunda, **E.Manole**, B.Estournet, A.Barois, K.P.Campbell, M.Fardeau, Congenital muscular dystrophy with merosin deficiency, C.R.Acad.Sci.Paris, Sciences de la vie / Life sciences, 1994, 317: 351 -357).

- 2020 – 2023: 7 articles awarded by UEFISCDI

- 2024 - EUROPOLITEHNICUS 2024 - **Gold Medal for Research Project** POC G, ID: P_40_197, Ctr nr. 522016, SMIS: 105631 *The implementation of biomedical research expertise through the transfer of knowledge to the private sector for the validation of products and services in the fields of medical biotechnology and health,* C Tănase, G Manda, M Neagu, E Codrici, ID Popescu, S Mihai, AM Enciu, C Constantin, S Pop, E Manole, E Codorean, L Ceafalan, A Arghir, M Leabu, M Gherghiceanu, LG Necula, R Albulescu, L Albulescu

Projects evaluator
Since 2020 I am a volunteer reviewer for several ISI journalstion.
Since 2016 I have been selected for evaluation of nationally funded research projects.

ADDITIONAL INFORMATION

Total number of publications: 39 (Web of Science), 48 (Scopus)
Total number of citations (excluding self-citations): >970 (Web of Science), >1145 (Scopus)
h-index: 11 (Web of science), 13 (Scopus)

Career breaks, unconventional career paths and major life events

During the COVID pandemic, I was directly involved in testing the humoral immunity to SARS-Cov2 infection of samples from ICU patients in Colentina Clinical Hospital, Bucharest.

Other contributions to the research community

- Courses held as Western Blot expert:

- Proteomics, from research to clinic: Western Blot, post electrophoretic analysis. Advanced course (2012-2013).
- Proteomics, from research to clinic: Western Blot, post electrophoretic analysis. Advanced course. Practical applications (2012-2013).

- Summer school for students, 2019-2020 (INCD Victor Babes): Clinical research “from bench to bedside” (B.O.Popescu, Emilia Manole)
- Summer school for students, 2022-2023 (INCD Victor Babes): Preclinical research, an essential and mandatory stage that precedes the initiation of clinical studies (B.O.Popescu, Emilia Manole)

- Memberships:

- Founding member of the Society of Neuropathology in Romania
- Founding member of the Electronic Microscopy Society from Romania
- Member of the Romanian Society of Immunology
- Member of the Romanian Society of Pediatric Neurology
- Member of OBCCSSR