

ABSTRACT

INTERDISCIPLINARY PATHOPHYSIOLOGICAL RESEARCH

The Habilitation thesis, titled "*Interdisciplinary Pathophysiological Research*," serves as a narrative of my professional, scientific, and academic journey. It reflects the work I have conducted in the field of pathophysiology since defending my doctoral thesis in 2013 at the University of Medicine and Pharmacy Târgu Mureș. My doctoral dissertation was titled "Analysis of Predisposing Factors of Diabetic Peripheral Neuropathy". It was officially recognized by the Minister of Education, Research, Youth, and Sports through Order No. 3930MD/20.06.2013, series I, No. 0005638.

This Habilitation thesis is organized into three distinct sections. The first section includes two subsections and adheres to the guidelines set forth by the National Council for the Attestation of University Titles, Diplomas, and Certificates (CNATDCU), as well as the standards established by the Doctoral School of UMFST GE Palade in Târgu Mureș.

The first section of the thesis

Professional activity. I am a senior neurologist with an M.S. Certificate (series P1, NR. 009873). Additionally, I hold two certificates in complementary studies: one in electroencephalography and evoked potentials, and the other in electroneurography and electromyography. Furthermore, I have completed superspecialization courses in plasmapheresis for autoimmune neurological diseases, cervico-cerebral Doppler ultrasonography, and botulinum toxin injection.

Teaching and academic activity. This activity was initiated within the Physiopathology Department at UMFST George Emil Palade in Târgu Mureș. I have progressed through various stages of my teaching career, starting as a university assistant in 2006, advancing to lecturer in 2014, and currently holding the position of associate professor since 2016.

I have taught courses and conducted practical work in physiopathology for nursing, nutrition and dietetics, dentistry, and general medicine programs, as well as at the medical faculty in English. I passed the PROFEX exam, which certifies my competence in teaching medical English. Additionally, I have completed courses aimed at developing digital skills and using e-learning platforms. Since 2020, I have significantly contributed to supporting the English language medical study program at the University Târgu Mureș Medical Campus Hamburg (UMCH branch).

I have prepared teaching materials by publishing books and book chapters aimed at students, as well as young residents and nutritionists who are at the start of their professional careers.

Within this discipline, we have applied the Case-Based Learning (CBL) and Team-Based Learning (TBL) methods. Additionally, starting with the current academic year, we have organized Objective Structured Practical Exams (OSPE).

This year, I participated in a teaching mobility program in Georgia as part of the Erasmus academic mobility initiative. During my time there, I had the opportunity to connect with academics from Tbilisi State Medical University and contribute to enhancing the international visibility of our university.

I coordinated student diploma and dissertation papers, participated in admission exams, and served on student evaluation committees within MARISIENSIS. I also took part in committees for filling teaching positions and competition committees for specialist doctors.

Scientific and research activity. The scientific postdoctoral activity is marked by the publication of 36 articles in fully indexed, ISI-listed journals. Among these, 21 articles were authored as the main contributor, including 7 articles from the Q1 quartile. These works have received 309 WOS citations (excluding self-citations). I have a Hirsch index (h-index) of 12 according to Web of Science, and as the main author, the cumulative impact factor of my publications is 62.64.

I have benefited from a postdoctoral fellowship and obtained funding as project director for 3 internal research grants. I have obtained 2 master's degrees: "Advanced Medical-Pharmaceutical Scientific Research" (2014) and "Health Services Management" (2024), the latter completed as class leader.

I am a member of three national scientific societies: pathophysiology, neurology, and neurophysiology.

Major scientific publications and personal contribution:

- 1) The study on microvascular complications of type 2 diabetes mellitus includes five articles published in journals with an IF, including one article in the Q1 quartile. These articles received 80 WOS citations. This research was partially funded by two internal research grants and a postdoctoral fellowship.
- 2) Regarding the Guillain-Barré syndrome, we have published three articles in journals with an IF, which together have received 24 citations in Web of Science.
- 3) The third chapter addresses the COVID-19 pandemic and other neurological complications: 3 reviews, 2 with IF above 4 in the Q1 quartile (51 WOS citations).
- 4) Another developed research direction is related to rare diseases: a systematic review on developmental and epileptiform encephalopathy 66 in the journal with FI 4.8, quartile Q1 (1 WOS citation).
- 5) The last chapter addresses other systemic complications (pulmonary fibrosis, ventilator-associated pneumonia, and Clostridium Difficile infection) associated with SARS-CoV-2 infection: 3 articles in the Q1 quartile (15 WOS citations).

The second section outlines the key development areas and objectives.

My professional goal is to improve diagnostic techniques and paraclinical investigations while promoting interdisciplinary collaborations.

Given that our primary role is to train the younger generation and guide them as they begin their journey, I propose to enhance my teaching activities and improve my evaluation methods. This will allow me to better contribute to the development of skilled specialists in the medical field.

I want to continue my scientific work, maintaining both my existing collaborations and research topics while also exploring new areas of inquiry. My ultimate goal is to enhance my personal visibility, as well as that of my university, on both national and international levels.

The thesis concludes with the **third section**, which includes a list of bibliographic titles selected from the briefly presented articles.