



**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY
BUCHAREST
DOCTORAL SCHOOL**

HABILITATION THESIS ABSTRACT
**"Development and Validation of Prognostic and
Diagnostic Indicators in Intensive Care"**

Candidate:
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The habilitation thesis entitled “*Development and Validation of Prognostic and Diagnostic Indicators in Intensive Care*” is structured into three sections, in accordance with the recommendations of the Romanian National Council for the Attestation of University Degrees, Diplomas and Certificates (CNATDCU) and national legislation.

The first section presents the academic, scientific, and research activity, highlighting in chronological order the main stages of the professional path in the medical and teaching fields. This section includes the most relevant publications, research grants obtained through competition, articles published in national and international specialized journals, as well as awards received. Memberships in relevant scientific societies are also mentioned, reflecting involvement in clinical activity and the professional community.

I graduated from the Faculty of General Medicine, “Carol Davila” University of Medicine and Pharmacy, class of 1998. I worked as a junior doctor for two years at the Central Military Hospital, and following the National Residency Examination in 2000, I obtained a residency position in Anesthesia and Intensive Care at the Bucharest University Center, within the ICU clinic of the Central Military Hospital. In 2006, I achieved the title of specialist in Anesthesia and Intensive Care, and in 2011, I became a senior consultant.

My teaching and research career began in 2009, as a Assistant Lecturer in Anesthesia and Intensive Care, within the Faculty of General Medicine at “Carol Davila” University of Medicine and Pharmacy, with teaching activities carried out at the Elias University Emergency Hospital. This was followed by my appointment as Lecturer (2020–2024), and in 2024, I obtained the position of Associate Professor.

Within my teaching activity, I have contributed to the training of ICU residents and to practical sessions for sixth-year students of the “Carol Davila” University of Medicine and Pharmacy, according to the curriculum of the Anesthesia and Intensive Care module. I have also organized workshops and symposia on specialized topics and delivered oral presentations at national and international scientific events. I have authored articles and scientific publications, actively participating in clinical research carried out within the clinic.

From a clinical perspective, I coordinate the ICU department and the national programs implemented therein. I am responsible for scheduled and emergency anesthesia procedures, ensuring adequate intensive care for critically ill patients, applying advanced intensive care techniques, as well as identifying and maintaining organ donors. I have introduced and applied innovative therapies, such as mechanical ventilation in NAVA mode and ECCO₂ removal, thus contributing to the optimization of critical care management.

My entire career reflects a continuous commitment to medical education and scientific research within one of the most prestigious medical education institutions in Romania. As a graduate of the Master's program in Social Services and Health Management, Faculty of Sociology (2018), I constantly maintain my desire to improve and to integrate new knowledge into my teaching and clinical activity, for the benefit of patients and students.

My doctoral thesis, "*Ventilator-Associated Pneumonia – Local Epidemiology and Treatment Strategies*", coordinated by Prof. Dr. Petre Iacob Calistru, was defended in a public session in 2015 within the Doctoral School of the "Carol Davila" University of Medicine and Pharmacy. This moment represented the achievement of a significant level of academic recognition and constitutes an important milestone in the evolution of my professional career, as well as a reference point in my research activity over the years.

My research activity is highlighted by the full-text publication of 50 articles indexed in Clarivate – Web of Science, the full-text publication of 18 articles indexed in BDI, as well as 22 book chapters published in international and national publishing houses. I have participated in 17 research grants as director, expert, trainer, principal investigator, sub-investigator, or member of the research team. I have also carried out activity as a Reviewer for national and international journals, which can be accessed by visiting my profile on the Web of Science Researcher ID platform - AAG-2433-2021.

The second section presents the directions for the development of my academic and scientific research career, based on the studies conducted and research projects carried out or currently in progress.

A sustainable academic and medical career is built on genuine collaboration, mutual respect, and the promotion of professional excellence. Constant interaction with students, residents, and colleagues in the medical field contributes to creating a learning and practice environment based on trust, competence, and responsibility. In this framework, meritocracy and respect for professional value must remain essential references, regardless of institutional or societal context.

In conducting teaching, research, and clinical activities, I will continue to prioritize respect for ethical and deontological principles, guided by fundamental values such as academic freedom, equal opportunity, fairness, professionalism, and transparency. These not only define the conduct of a responsible teacher and physician but also contribute to strengthening an academic and medical community oriented toward progress, integrity, and respect for education and patient care.

Based on the experience I have accumulated, I intend to further develop research activities on topics with practical applicability and scientific relevance. Specific objectives include:

1. Exploring the applications of artificial intelligence in medical care in intensive care units.
2. Practical and theoretical approaches to new directions in the development of mechanical ventilation (invasive and non-invasive), as well as contributing to the development of new medical devices.
3. Research and bedside application of innovative and personalized therapies for the treatment of sepsis and septic shock.

The third section includes relevant bibliographic references that formed the basis for the elaboration and argumentation of the proposed topics.