

**THE „CAROL DAVILA” UNIVERSITY  
OF MEDICINE AND PHARMACY, BUCHAREST  
DOCTORAL SCHOOL  
MEDICINE DOMAIN**



**Multidisciplinary research in the field of neurophysiology and the  
inflammation-carcinogenesis interaction**

**SUMMARY OF THE HABILITATION THESIS**

**CANDIDATE:**

SCHEAU CRISTIAN, Associate Professor

The „Carol Davila” University of Medicine and Pharmacy, Bucharest

**2022**

## SUMMARY

The habilitation thesis entitled „*Multidisciplinary research in the field of neurophysiology and the inflammation-carcinogenesis interaction*” marks an important progress in the academic, professional, and research endeavors undertaken since the finalization of the doctoral thesis with the title „*Physiological mechanisms and pathophysiological processes of hepatic encephalopathy - evaluation by Magnetic Resonance Spectroscopy*” sustained on June 10<sup>th</sup>, 2014, under the coordination of Prof. Ioana Anca Bădărău.

**Chapter 1** presents the achievements in the scientific activities, mainly developing the papers elaborated in the personal dominant fields of research, more specifically, the interaction between inflammation and carcinogenesis, as well as neurophysiology and neuroimaging. Moreover, throughout the last years, I have contributed to the writing and publishing of papers on the topic of COVID-19 pathophysiology, published in a series of international journals, the most important results being presented in this section of the thesis.

Furthermore, in this chapter, I have presented the scientific and research results, respectively the contribution in the writing of books and treaties, being a coauthor for a large number of chapters included in a total of 10 works, a unique author for a treaty published by a national publishing house, and a co-author in a chapter included in a treaty published by an international publisher, more specifically, Best Practice in Health Care, published by Springer. Also, I have contributed to translating and adapting treaties of Physiology/Physiopathology.

Regarding the publications in scientific journals, I am an author of 33 articles published in journals indexed in Web of Science (Core Collection) and 19 articles in journals indexed in international databases (IDB). I have published 6 studies appearing as an abstract in ISI indexed journals with impact factor and 27 studies appearing in summary in journals with ISBN-ISSN. As for the elements of recognition of the scientific and research activity, I currently have a Hirsch index of 6 using ISI Web of Science, Core Collection, Thomson Reuters for the entire academic career, and a Hirsch index of 9 calculated in Google Scholar (Google Academics). I have accumulated 211 citations in ISI Web of Science with an average of 6.59 citations per paper and a total of 368 citations in ISI Web of Science and international databases, according to Google Scholar.

Throughout this entire period, I have acted as a reviewer of scientific papers for various journals indexed in Web of Science or other international databases, accumulating over 80 evaluations for more than 20 journals. Also, I have served as an editor for 5 scientific journals and I am a member of multiple scientific associations. Furthermore, my scientific and research activity was acknowledged by being granted 14 national prizes for various presentations and published papers.

**Chapter 2** presents the personal academic track, describing my evolution within the discipline, starting from the position of Teaching Assistant which I occupied since 2011, then promoted to Assistant Professor in 2016, and later promoted to Associate Professor in 2022. This chapter features the main academic roles of the currently occupied position, as well as other supplementary academic steps taken. Furthermore, I have teaching experience not only within the discipline where employed but also in related disciplines as well as within the post-university teaching system and the Doctoral School.

As part of the teaching activities, I have participated in the development of various teaching materials addressed to the students, to complement the topics presented in the lectures and seminars; these include manuals, lectures, presentations, labwork charts, and images destined to be used in the practical lessons. Moreover, I have developed as many as 42 movies with durations between several minutes and 77 minutes, dedicated to improving the teaching experience and learning process of the students.

I have coordinated a number of dissertations, starting from 2015 and I have participated in the organization of the admission examination for the “Carol Davila” University of Medicine and Pharmacy, Bucharest, in various positions, including my participation in formulating the “*Biology*” questions for the examination. I have participated as a member in internal competitions and I have contributed to the preparation of institutional documents for the quality assurance process required for the University accreditation in 2021.

In **Chapter 3** I presented my professional record, starting from the admission in the medical specialty of Radiology and Medical Imaging in 2010, by national competition, validated by the MHO confirmation no. 1522/03.12.2009. I underwent specialty training within the Laboratory of Radiology, Medical Imaging and Interventional Radiology of Fundeni Clinical Institute under the coordination of Prof. Ioana Gabriela Lupescu and I have sustained the examination to become a medical specialist in Radiology, and Medical Imaging in 2014, being validated through MHO confirmation no. 1/2015 starting from January 1<sup>st</sup>, 2015. As a

medical specialist, I have completed my professional experience by collaborating with a variety of imaging medical clinics, starting from August 2015. I have gained several certifications for complementary studies, as follows: Certification for complementary studies in Computed Tomography (July 2015), Certification for complementary studies in Magnetic Resonance Imaging (December 2015), Certification for complementary studies in the Management of Health Services (February 2021). I have refined my professional training by participating in over 85 medical congresses, conferences, seminars, and workshops which allowed for the integration of my medical specialty with my academic field, allowing for a broader, more complex and detailed view of the mechanisms and processes involved in the pathology investigated through my medical specialty.

Furthermore, in **Chapter 4**, I presented my proposal for the evolution and development of my academic career. In the introduction, I have identified a series of current critical problems requiring additional focus in the following period. I proceeded in presenting the summary of my activity, sustaining my abilities in approaching these issues and I ran a SWOT analysis for consolidating the proposal for the evolution and development of the academic career. Furthermore, I presented my structured plan for the evolution and development of my academic career, emphasizing the need to develop and consolidate the research group of the Discipline, developing professional transdisciplinary means and teaching applications. I developed these aspects by identifying the scope, objectives, and activities required for the completion of the targets as well as the main expected results. I proposed a series of future plans and I concluded this section by presenting a thorough analysis of the academic development in the context of the SARS-CoV-2 pandemic, factoring its impact on the evolution and development of my academic career.

In conclusion, to allow for the concordant and successful development of an academic career it is required to carry on a sustained activity guided towards personal improvement, reaching the established goals, following new opportunities, and structured approach of the scientific and research activities. Opening to new collaborations with peers from national or international universities, as well as engaging students in research activities within the Research Group of the Discipline are adequate approaches for improving the academic activity and may ensure professional success. Promoting quality, academic rigor, and research ethics are methods that support personal and institutional prestige.