

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



The Habilitation Thesis Abstract

**NEPHROLOGY EMERGENCIES - MERGING
PRACTICAL EXPERIENCE WITH CLINICAL
RESEARCH**

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This habilitation thesis summarizes my main scientific, professional and academic achievements after graduating the doctoral school of the "Carol Davila" University of Medicine and Pharmacy in Bucharest with the doctoral thesis entitled "Correlations between Ethiopathogenesis and Treatment in Acute Renal Failure" (Scientific Coordinator: Prof. Dr Ciocalteu Alexandru, order of confirmation MEC 4199 / 30.05.2005). The thesis also presents the objectives that I want to achieve in the future for further development of my career. I wrote the thesis according to the specific Methodology of the "Carol Davila" University of Medicine and Pharmacy Bucharest.

The actual thesis includes an introduction, four chapters and references.

In the "**Introduction**", I briefly present the professional evolution up to the date of the habilitation exam, starting with the training period in internal medicine and then in nephrology and reaching to the actual stage of senior physician in internal medicine (from 1999) and in nephrology (from 2001). I also present the evolution of my academic career in the University of Medicine and Pharmacy "Carol Davila" from the position of university assistant in 1998 to that of associate professor in 2021, which I currently hold, all didactic degrees being obtained by competition.

Chapter 1, entitled "**Scientific Activity/Scientific Achievements**" summarizes the main areas of research, most important personal contributions and results of clinical studies performed, published scientific articles and books, and also other activities relevant for the scientific activity.

With the exception of the residency period in internal medicine, my entire professional activity took place in the "Sf. Ioan" Clinical Emergency Hospital, which is a multidisciplinary, emergency hospital that treats 24/7 medical and surgical emergencies as well as complex multidisciplinary cases sent from other hospitals. As a result, the major interest of the scientific activity was focused on the field of emergency nephrology, a field with a diverse, severe cases requiring multidisciplinary approach. In this thesis I have chosen to briefly present the results of research activity in 3 priority areas in which I have concentrated most of my work and in which I have participated in clinical studies.

The first section and the most consistent is dedicated to **acute kidney injury**, a topic that has been a permanent priority in my professional activity, starting with my doctoral thesis. In this section, after a brief introduction regarding the importance of the subject, I presented most relevant clinical studies performed in collaboration with the colleagues in my department. These studies are grouped according to the subject in four subsections: changes in the epidemiology pattern of acute kidney injury; markers of severity and prognosis in acute kidney injury; characteristics of acute kidney injury in high-risk patients (cancer, contrast media, medication-related, elderly); timing of renal replacement therapy and modality option in acute kidney injury. Also in this section, due to exclusive admission in our hospital of SarS-CoV-2 infected cases in the last 2 years, I presented studies performed on COVID-19-associated acute kidney injury cases. Experience accumulated on the topic of acute kidney injury is illustrated not only by the numerous published full-length articles and communications in international and national scientific meetings, but also by the publication of 2 monographs, one as single author and the other as co-author. In the second section I presented most relevant studies that I participated at regarding some **aspects of emergencies in chronic kidney disease** patients, like hypertensive emergencies in predialysis stages, rapid point-of-care microbiologic diagnosis in peritoneal dialysis peritonitis, bleeding complications in hemodialysis patients. The last section presents my personal contribution to the detection of fibrosis of the native kidney by **ultrasound elastography**, a field for which I have a special interest, though it is not a field of emergency medicine.

In this chapter I also briefly present my participation, as an investigator, sub-investigator or collaborator in national or international multicenter studies, mostly in the field of nephrology, but also in the field of internal medicine as a result of my activity and dual qualification as a nephrologist and internist.

Chapter 1 also includes my activity as author or co-author of nephrology monographs and treatises, participation as member of editorial board of BDI-indexed journals or as a reviewer for ISI and BDI journals, participations in the scientific committees of several national scientific meetings.

The scientific activity is illustrated by the publication as main author or as co-author of 27 full-length articles in ISI rated journals and 45 full-length articles in other

journals (of which 25 in BDI indexed journals). Out of the 73 full-length articles published during my entire career, 52 were published after 2005, when I obtained the title of Doctor of Medicine. Also, the results of the research activity were presented at international or national scientific events with 110 abstracts/summaries published, of which 37 in ISI rated journals after 2005. All time activity citations from ISI rated journals or BDI indexed, as well as evaluation and metrics indicators are presented. There are over 290 citations and a 10 h-Index in Web of Science. In Google scholar there are over 350 citations and an 11 h-Index.

Chapter 2, entitled “**Academic activity**” presents academic course and teaching responsibilities during the 24 years passed from joining the medical higher education system in the University of Medicine and Pharmacy “Carol Davila”. During this period, I was actively involved in the theoretical and practical training of 5th year students studying in Romanian or English, in the nephrology module, as well as 3rd year students in the academic year 2015-2016 in the internal medicine semiology module. I have directed and coordinated more than 20 graduate theses of UMF "Carol Davila" graduate students and I have participated in the medical students scientific meetings. I was and still am actively involved in the process of training of resident doctors and I encouraged the resident doctors to participate in the studies conducted in the clinic. In this chapter I also present my participations as an author or co-author of teaching materials, as member of exam commissions for exams within the university and other relevant administrative activities.

Chapter 3 describes “**Professional Achievements**”, i.e. the professional grades obtained through competition and also the stages and professional formation courses, and the certificates obtained. In this chapter, I have also briefly enlisted my participation as a member of Exam commissions for obtaining the grade of specialist or senior physician in nephrology or internal medicine.

Last chapter is entitled “**Professional, Didactic and Scientific Perspectives**” and presents objectives for further career development on these three directions.

The main objective for my professional career is to continue to permanently improve my own training in line with development of medical knowledge by accessing and promoting continuing medical education programs for physicians and also by participation to scientific national and international meetings. I will continue to keep up with national and international guidelines in nephrology, in order to apply their recommendations in clinical practice, and to provide highly specialized healthcare services to a large number of patients with complex renal pathology.

In terms of didactic level, I consider necessary a constantly updating the information provided to students and residents, taking into consideration that there is a permanent change in knowledge in nephrology. Also, I will make all efforts to permanently change and adapt methodology of teaching in line with students' and residents' needs, their level of knowledge and the necessity to integrate all medical information received for acquiring the skills for independent medical practice. For the residents in nephrology in our department, I will continue to organize scientific meetings, lectures and case presentations with updated and interest topics. I will also continue to encourage their active participation in clinical studies performed in our clinic and also in publishing articles in national or international journals..

In the section dedicated to future plans for scientific activity, I present existing research directions on topics of emergency nephrology that I intend continue together with colleagues from the clinic. I also propose a more actively involvement in the future in identifying new research directions and new collaborators for research activity. Publishing the results of clinical studies in national and international impact journals will continue to be a priority, along with communication of these results in scientific meetings.

The last part of this habilitation thesis contains a list of references that includes publications relevant for the main areas of research and also personal contributions, published articles and books.