

“CAROL DAVILA” UNIVERSITY OF MEDICINE AND PHARMACY



HABILITATION THESIS

***THE EVOLUTION TOWARDS AN INTEGRATED, MULTIDISCIPLINARY
AND PERSONALIZED APPROACH TO PATIENTS WITH CHRONIC
DIGESTIVE DISEASES***

ABSTRACT

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I present my habilitation thesis entitled “Transition to an integrated, multidisciplinary personalized approach to patients with chronic digestive diseases” which contains my principal and latest scientific contributions. All the articles that I present have been published after finishing my doctoral studies. Although my research field has been broad, these studies are all centered around the multidisciplinary approach in three sectors – digestive oncology, IBD and chronic hepatitis. I chose to study different perspectives, both scientific, medical and/or social. This approach is of great importance lately due to the arise of personalized medicine. The thesis is structured in 4 chapters which I will be presenting briefly.

The first part of the habilitation thesis is the introduction, a short narration referring to my models for the medical career. The second chapter presents the various types of activities, either professional, educational, scientific or didactic, that set the premises of my career. The third chapter gives details regarding the organizational and institutional activities that I am currently involved in. This chapter elaborates my present involvement in the national colorectal screening program. The fourth chapter contains the most important results of my academic research activities. The last chapters refers to my future development program.

My professional activity as head of the Second Department of Gastroenterology in Fundeni Clinical Institute has been a constant motivator for research. My experience in clinical practice is vast with many difficult cases both in terms of diagnosis and management. Due to the multidisciplinary approach heavily supported in our center and to several aptitudes that I have acquired throughout my career we have managed many complex cases. All these have contributed to perfecting the medical activity, with major implications in my didactic and research development.

I started my academic career as Assistant Professor in 1995 and I became Associated Professor in 2008. As such, I have conducted courses and seminars for medical students, resident and postgraduate doctors in multiple specialties. My interest in the organizational spectrum of medical activities has led me to finish the Public Health and Management Specialty in 2004. Furthermore, in December 2011, I also passed the examinations for a second specialty in Oncology.

In 2008, as Secretary of State in the Ministry of Public Health I had the privilege to represent Romania at the United Nations High Level Meeting regarding HIV/AIDS. I presented the statement regarding national particularities for HIV-AIDS in Romania.

Due to my vast experience in hepatology and gastroenterology, between 2015 and 2021, I was appointed as vice-president of the Expert Commission of the National House of Health Insurance for the approval of the treatment for chronic viral hepatitis, liver cirrhosis and inflammatory bowel disease. The protocols for treating chronic hepatitis C, pancreatitis and multiple IBD molecules were established during this period of time. In 2019 I was appointed president of the Gastroenterology Commission in the Ministry of Health.

Apart from all the different positions that I have been occupying in multiple institutional domains, I consider the current position as manager for the ROCCAS I Project - “Development and implementation at national level of the organizational framework necessary to initiate screening in colorectal cancer SMIS: 128106” one of particular interest.

The projects main objective is optimizing patients’ access to quality medical services by improving the level of medical training devoted to early detection, diagnosis and treatment of colorectal precancerous lesions. The specific objectives include the development and implementation at national level of the organizational framework necessary for the initiation of screening in colorectal cancer, the development of the screening registry for colorectal cancer (ROC) and the development of the uniform standards for screening. This will refer to standardized protocols, procedures, forms and testing strategies for diagnosis, advising and referring to treatment of lesions detected.

The project has two institutional partners, Fundeni Clinical Institute and the National Institute of Public Health. Each of the partners have specific responsibilities within the project. Following the project, four regions (South-East, South, South-West, Bucharest-Ilfov) already implement the methodology in pilot screening projects providing 50.000 FIT tests in the general population and 2100 colonoscopies in presumable FIT positives.

I have always considered the participation in local and international congresses as a key element in the continuous medical education. In the last years I have participated and organized many national congresses of Gastroenterology, Hepatology, Digestive Oncology and Digestive Endoscopy. Furthermore, in collaboration with Prof. Diculescu and Assoc. Prof. Croitoru, we have initiated many franco-romanian meetings both in the oncological and in the inflammatory bowel disease fields.

The fourth chapter refers to my scientific research orientations and is divided by the field in which articles were published (inflammatory bowel diseases, hepatology, oncology). Other

materials that I have published, including books, chapters in books, scientific papers in national and international congresses will be listed at the end of this chapter.

Overall, I am author of 53 publications in Web of Science Core Collection among which 16 as principal author. I have also published other articles in B and B+ journals or in congress abstract booklets. These articles were published in different fields: 29 in the Gastroenterology Hepatology, 7 in Internal Medicine, 8 in Surgery, 3 in Developmental Biology, 4 in Pathology, a total of 7 articles in different fields of chemistry, biology and immunology.

In 2012 I participated in a phase 2 international project for Ulcerative Colitis as an endoscopy specialist. This group conducted by Travis and Sandborn went on publishing the results in GUT and defined the Ulcerative Colitis Endoscopic Index of Severity, one of the most used endoscopic scores in practice (276 citations until 2021).

Among the articles I have published, the most important papers are on viral hepatitis C in cirrhotic patients in Romania, published in Liver International in 2018 and in United European Gastroenterology Journal in 2019. These target an important direction of my scientific activity, which was the evaluation of antiviral treatments in patients with chronic hepatitis and cirrhosis. This has been the theme of many published articles targeting the efficacy and safety of these therapies, and also predictive factors for therapeutic response. The details of these articles are included in the thesis. Moreover, in 2016 I signed the European Declaration for Eradication of HCV in the EU Parliament.

Another domain in which I published was the inflammatory bowel disease pathology. Together with the team from the Victor Babeş Institute represented by Dr Becheanu Gabriel, Elena Milanesi and Monica Dobre, we published multiple articles regarding mucosal gene expression and transcriptomic biomarkers in patients with inflammatory bowel diseases. Our joint articles were appreciated at international level and were cited in important publications such as Nature, Journal of Crohns and Colitis, Science, International Journal of Molecular Science.

The main themes that I have presented in scientific congresses are connected to colorectal cancer screening. However, I have also presented the results of our research in viral hepatitis C, hepatocellular carcinoma and IBD. During my career I have participated in numerous research teams in national and international clinical trials: 14 international trials as principal investigator and multiple other international trials as member in the research team.

The last chapter presents the plan for my future research matrix. The general objective of my academic career was to continue and expand the educational background of the Fundeni Clinical Institute. This implies both theoretic and practical guidance for students, resident doctors and other medical staff. Obtaining my habilitation to coordinate PhD activities will also allow me to continue with the scientific research. My current line of interest in colorectal cancer screening will enable new results in the modern medical community. Furthermore, I will offer support for the ongoing inflammatory bowel disease and hepatology studies. I believe that participation in competitions for grant titles and scholarships could be one of the most effective ways of research financing.

The reference list for the thesis is in the final part of the habilitation thesis.