

**"VICTOR BABEȘ" UNIVERSITY OF
MEDICINE AND PHARMACY TIMIȘOARA
DOCTORAL SCHOOL
MEDICINE DOMAIN**



HABILITATION THESIS

MULTIDISCIPLINARY APPROACHES AND THE IMPLEMENTATION OF MODERN TECHNIQUES IN GENERAL SURGERY

A B S T R A C T

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**Timișoara
2021**

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ABSTRACT

Surgery in the late twentieth and early twenty-first centuries has faced a series of challenges related to the qualitative and quantitative abundance of information and technological advances that push the boundaries of healing and surgical workmanship.

If 40 years ago we lived in a regime devoid of freedom, information and modernization, with the December 1989 Revolution, we entered a rollercoaster of change, that beyond the obvious medical progress in our country, also brought some vicious developments given the speed at which it occurred.

Fortunately, today we are connected to the modern medical world thanks to the freedom of movement through specialized publications and through the online environment. However, all of this content must be filtered so it can be adapted to the different stages of development of surgical branches in our country.

Surgery as everyone knows it has been modernized in recent years thanks to new discoveries in the field of physics, technology and basic sciences. Perhaps the most eloquent example is that of laparoscopic surgery, which has had a very noteworthy evolution, reaching a point at which it can be considered a gold standard. An important role in the implementation of new surgical methods and techniques is attributed to university specialists, who by participating in international conferences and congresses received training in lectures and workshops and made every effort possible to acquire modern equipment, which in turn made possible the implementation of these revolutionary techniques to as many patients as possible. During the process of adapting to the new reality, the importance of a multidisciplinary medical approach was highlighted. Thus, multidisciplinary teams were formed, within which collaborations were made between the different medical/surgical departments, which led to an increase in the quality of medical care. Once experience was acquired, we in turn were able to disseminate our know-how further.

The great challenge for a teacher is to harmonize academic, professional and scientific (research) activity. These three elements form a unit and cannot be approached separately because they intertwine and condition each other. It is not possible to carry out research modules without professional activity, which also conditions the postgraduate education module. The peculiarity of medical education is represented by the existence of the postgraduate module represented by the residency period, which is at least as important as university education.

Success in medical university activity is conditioned by perseverance and self-improvement. There is a need of continuous training so that one can be up to date with the latest news in that field of research. These qualities will make it possible to create and/or continue the notion of surgery school. My chance was to train and grow in a real surgery school, namely in the Second Surgery Clinic, a school created by professor Ion Mureșan, a former student of professor Iacobovici. In this clinic I was taught what rigor and empathy mean, essential elements for the activity of a surgery teacher.

The existence of the afore mentioned elements leads to an increase of educational quality and to the obtaining of clearly superior scientific and surgical results.

In the face of current realities - the large number of students, the avalanche of information and digitization - a university professor must:

- be able to adapt to modern teaching trends, disseminating solid and constantly updated knowledge;
- be empathetic, with a willingness to create work teams, functional structures for attracting students in extracurricular activities, which can be the starting point for a future surgical career;
- to be able to identify human resources and motivate by personal example, being in fact a mentor, a spiritual parent;

The habilitation thesis summarizes my entire professional, academic and scientific activity after completing my doctoral research. It was developed according to the recommendations of the Ministry of Education and Research (Order of the Ministry of Education and Research no. 3121/27,01,2015) as well as the Guide for drafting the Habilitation Thesis at the University of Medicine and Pharmacy "Victor Babeș" of Timisoara according to CNATDCU recommendations. The thesis

comprises three parts: the first part is dedicated to professional, academic and scientific (research) activity, the second part presents the development plans and perspectives in the three directions, and the last part includes bibliographic references.

The thesis begins with the presentation of landmarks in my professional activity.

I graduated in 1988 after which for 2 years until December 1990 I carried out my medical activity in the Second Surgery Clinic within the University of Medicine and Pharmacy "Victor Babeş" Timișoara as a trainee doctor. Based on the order of the Minister of Health no. 1007 of 16,07,1991 I was confirmed as a secondary doctor in the specialty of general surgery based on the promotion contest in medical higher education and the secondary competition in October 1990. In 1994 I obtained the title of general surgery specialist according to the order of the Minister of Health no. 240 of 18,02,1994 on the basis of the examination taken and passed with a grade of 9.65, in session 17,01,1994.

After 4 years, in 1998 I obtained the title of general practitioner of general surgery (confirmed by the Order of the Minister of Health no. 694/1998), following the exam passed with a score of 9.44. Then followed the „Primary” doctor position, and then on 11,09,2019 I competed for the position of head of the General Surgery Clinical Section III within the Emergency County Clinical Hospital "Pius Brânzeu" Timisoara in accordance with the provisions of the Order M.S.P. no. 1406/2006, corroborated with the provisions of art. 184 of Law no. 95/2006. The advanced training courses in which I participated both as a student and as a lecturer / trainer are mentioned in my resume.

I continued with the chronological description of the stages of my academic career that began in February 1991, after the competition for the position of university preparator that I ran for in December 1990. After 2 years, in 22,02,1993 I was promoted to the position of assistant professor . The next step was possible only after defending the doctoral thesis - SURGICAL ASPECTS REGARDING THE WAYS OF ACCESS TO DIALYSIS - thesis made under the leadership of Professor Dr. Doru Bordoş. The confirmation of the doctorate in the field of medicine was dated on 13,01,2009 based on the order of the Minister of Education, Research and Youth no. 3030. Thus creating the premises for future advances.

Based on the decision 169 of 18,02,2013, I held the position of head lecturer at the Faculty of Medicine within the University of Medicine and Pharmacy "V. Babeş" Timișoara, discipline Surgery II position 14.

After 3 years as head lecturer, according to decision 205 of 11,05,2016 based on the competition held for the position of associate professor, position 17, discipline Surgery, Department X: Surgery II, I was assigned to this position starting with the first semester of the academic year 2016- 2017. The extracurricular student teaching activity and my involvement in postgraduate courses addressed to residents and young specialists was presented in detail. Personal contributions to the drafting of specialized treatises and involvement in research projects carried out in the Second Surgery Clinic are mentioned. I will mention the Emergency Surgery which is still part of the bibliography for the specialized exam and the Compendium of Medical-Surgical Specialties, where under the coordination of Professor Dr. Lazăr Fulger I would write the chapter Acute Appendicitis.

On January 1, 2021, my research activity, according to the ISI Web of Knowledge was rated with the following values: Hirsch index of 12, a total number of 47 indexed publications, a total of 355 citations, published in 10 subdomains.

The research activity we undertook had three important directions: vascular surgery in hemodialysis patients, collaboration protocols for gynecological and obstetric diseases, general, emergency surgery, minimally invasive surgery and endocrine surgery.

Approaching all these surgical subdomains was possible through the interdisciplinary approach of pathology types; excellent collaboration between the surgical team and the nephrological, endocrinological or gynecological team. Another defining element is that of interinstitutional collaboration. Studies were carried out in collaboration with teams of the University of Medicine and Pharmacy "Carol Davila" Bucharest, respectively the University of Medicine and Pharmacy Craiova.

In the study of vascular access surgery for patients with chronic kidney disease, we proposed and published articles that showcased both classic and innovative surgical approaches. Both the elements of surgical technique and the functional results were presented. In this subchapter we present in detail study carried out in collaboration with the pathophysiology department of our university, which analyzes the role of monoamine oxidase mediator of endothelial dysfunction

and the beneficial effect of monoamine oxidase inhibitors. The latest research presented in this subchapter focuses on the opportunity to perform parathyroidectomy in a patient with secondary hyperparathyroidism and Epstein's disease. The redaction of the study was possible following the excellent collaboration of the First Surgery Clinic within the University of Medicine and Pharmacy of Craiova.

The contribution and involvement of a general surgeon in gynecological and obstetrical surgery is possible and beneficial when working alongside a multidisciplinary team. Starting from the idea of promoting minimally invasive surgery, we wrote a material that presents in detail the laparoscopic variant of performing radical hysterectomy in patients with cervical cancer. This was the beginning of the interdisciplinary collaboration that made the screening of cervical cancer and the endocrinological follow-up of pregnant women with thyroid dysfunction possible. A special place in this subchapter is dedicated to the presentation of a complication in bariatric surgery of a pregnant woman. This case shows the need to implement interdisciplinarity, having both obstetric and emergency surgical implications due to existing gastric necrosis.

The last part presents the results of the implementation of minimally invasive methods of treatment in hepatic hydatid cyst and collaborations with the endocrinology clinic, in treating thyroid diseases, a field with a tradition of over 70 years.

Taking into account these professional, academic premises, to which I added the experience of highlighted research, I have a well-structured plan for academic development that aims to achieve the following objectives: adapting the student curriculum, in conjunction with writing new textbooks for both courses and clinical internships; bringing the way of teaching and the acquisition of knowledge closer to the 21st century; greater openness to students in access to hands-on facilities, and where their access or input can and should already be improved; student science circles are a very good example of career guidance that needs to be supported and developed; The Romanian Surgery Student Society must be logistically and materially supported in its actions; continuing the implementation of minimally invasive surgery in the current practice and in the training program for residents; reviewing residents training, both curricular and targeting technical and organizational issues. This curricular and organizational reform can lay the

foundations for post-residential overspecializations and can lead to the accreditation of the university, clinic and hospital as training centers for surgical overspecializations; multidisciplinary teams - way of establishment, collaboration and implementation in current practices.

During this moment of medical activity, multidisciplinary is essential due to the multitude of existing information specific to each specialty. Their need is obvious regardless of the subdomain that is being discussed, whether it is vascular access, endocrine surgery or cancer surgery.

These goals can be achieved in the future through the university's own financial resources, through the resources of the ministries of education or health or through projects with European funds that will bring the desired coverage and results.

The list of bibliographic references completes and concludes the habilitation thesis.

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