

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



# **HABILITATION THESIS**

**CONTRIBUTIONS OF GENERAL SURGERY FOR THE  
MULTIDISCIPLINARY APPROACH OF METABOLIC,  
DIGESTIVE ONCOLOGY, AND GYNECOLOGICAL  
PATHOLOGIES**

## **A B S T R A C T**

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## **ABSTRACT**

The field of surgery has been confronted with a number of difficulties as a consequence of the quantity of information, both qualitatively and quantitatively, as well as technological advancements that are pushing the frontiers of healing and surgical craftsmanship. We are fortunate to be linked to the current medical world owing to the freedom of travel, the availability of specialist publications, and the presence of the internet in today's world. However, all of these must be run through a filter in order to be fitted, not so much to the particulars of the location but rather to the many phases of growth that are present among the surgical specialties in our nation.

During all of these years, breakthroughs in the fields of physics, technology, and the basic sciences have helped to modernize surgery as it is practiced today. This is something that everyone is aware of. The example of laparoscopic surgery, which had a highly unique development and eventually reached the point where it could impose itself, is the most compelling. Specialists from the university environment played an important part in the implementation of new surgical methods and techniques. These specialists took part in international conferences and congresses, benefited from training in organized courses, and made all of the necessary steps for the purchase of modern equipment, which enabled the implementation of these revolutionary techniques that benefited and continue to benefit as many patients as possible. The significance of a collaborative effort amongst many medical specialties became clear as a result of the process of adjusting to the altered circumstances. As a consequence of this, multidisciplinary teams were established. Within these teams, partnerships were formed between the various medical and surgical specialties, which ultimately resulted in an improvement in the quality of medical care provided.

The dissemination of information and outcomes was made feasible as a direct consequence of the accumulation of experience. The successful coordination of a teacher's academic, professional, scientific, and research responsibilities is one of the most difficult challenges they face. It is only feasible to construct research modules with professional activity, which also conditions the postgraduate education module. Together, these three components make up a unified totality that cannot be

treated independently since they are interconnected and conditioned. The distinctive feature of medical education is the presence of a postgraduate module, which takes the form of a residency and is at least as significant as the education received at a university.

Perseverance and a commitment to one's own growth are necessary ingredients for academic achievement in medical school. There is a need for ongoing training to ensure that one is knowledgeable of the most recent happenings in their particular area of endeavor. Responsiveness is required for one to have knowledge of the most recent work trends and directions in order for them to be accepted and implemented. Because of these characteristics, the concept of a school of surgery will either be able to be established or maintained. My opportunity was to develop and advance inside a legitimate surgery school, namely within the II Surgery Clinic, which was established by Professor Ion Muresan, a graduate of Professor Iacobovici's previous class. I was educated at this institution on the meaning of rigor as well as empathy, all of which are crucial components for the job of a surgical educator.

The presence of the aforementioned components has the potential to result in an improvement in the overall standard of educational activities as well as the production of much more advanced scientific and professional (surgical) outcomes. A university professor needs to be able to adapt to modern teaching trends, disseminate solid and constantly updated knowledge, be empathetic, with the willingness to create work teams and functional structures for attracting students in extracurricular activities, which can represent the starting point towards a future career in surgery, and liaising with other faculty members. This is because the current realities include a large number of students, an avalanche of information, and digitization.

After finishing my Ph.D. study, I was required to write a habilitation thesis that would describe my whole post-doctoral professional, academic, and scientific activities. It was crafted in accordance with the recommendations of the Ministry of Education and research, as well as the guide for drawing up and drafting the habilitation thesis within the University of Medicine and Pharmacy "Victor Babes" from Timisoara, which was crafted in accordance with the recommendations of CNATDCU. Both of these documents were developed in accordance with the recommendations of CNATDCU. The thesis is divided into four sections: the first

section is devoted to scientific accomplishments and is subdivided into three primary areas of study; the second section covers academic accomplishments, and the third covers professional accomplishments; while the fourth section discusses the possibilities for the future. The discussion of the scientific investigation will kick off the beginning of the thesis.

I received my degree in 2004 from the University of Medicine and Pharmacy "Victor Babes" in Timisoara. Following that, I inhabited the role of University preparator within the Clinic II surgery beginning in February 2009 after competing for the position. I was confirmed as a resident doctor in the specialty of general surgery based on the results of the residency competition and the order issued by the Minister of Health in 2005. I began my study in the specialty as a resident doctor in January 2006. I took an examination in general surgery in January 2012 and was awarded the title of general surgery specialist as a result of my performance on the examination. Four years later, in January 2016, I took the same examination and was awarded the title of main doctor in general surgery.

Throughout the course of my professional education, I insisted on gaining knowledge from the most qualified individuals and made applications for surgical training whenever I had the opportunity. In addition, the professor who served as both my advisor and instructor, Dr. Fulger Lazar, urged all of the staff members at the clinic to overspecialize and focus on the most recent surgical subspecialties. This ongoing training process, which has been complemented by the development of brand-new, cutting-edge surgical methods, has been and will continue to be an essential component of this specific surgical school.

I proceeded with the chronological explanation of the phases of my academic career, which started in February 2009, when I won a competition to become a university preparator at the II Surgery Clinic of the Timisoara County Emergency Clinical Hospital. The environment and the activity model, which were passed down from Professor Lazar Fulger, had a role in shaping the path that I took throughout my time at college.

After working as an instructor for two years, in 2011, I was given the position of assistant professor. After a period of nine years, the next step was taken and beginning in September 2020, I will be assuming the role of "Chief works." This was made possible following the conclusion of doctorate studies in the year 2014 via the doctoral thesis named "remission of metabolic syndrome after laparoscopic gastric

plication compared to laparoscopic longitudinal gastrectomy in patients with morbid obesity." In the academic year 2022, I competed in a competition held by the University of Medicine and Pharmacy "Victor Babes" Timisoara to choose who would fill the post of "Associate Professor." I came out on top and began working in that capacity in September of that year.

My pedagogical efforts were concentrated on the two distinct paths of medical education, namely undergraduate and postgraduate study. The topic of general surgery is included in the curriculum of the Faculty of Medicine at the University of Medicine and Pharmacy "Victor Babes" in Timisoara. Students who are majoring in general medicine are required to study this subject during their fourth year of schooling. Since the beginning of my work as a teacher up to the present day, I have been responsible for instructing students in this subject area. Concurrently, however, I have also taught a number of students who are enrolled in the Faculty of General Nursing.

The following values were attributed to the research endeavor as of the first of January in the year 2023: The Hirsch index is 7, there are a total of 44 articles that are indexed, and there are 167 total citations. Contributions to bariatric surgery and obesity management, contributions to surgical oncology of the digestive system, and contributions to gynecology and obstetrics were the three primary focuses of the study that we carried out. Because of the multidisciplinary approach that was taken to the many forms of the disease, it was able to tackle each of these surgical subdomains. Interinstitutional cooperation is an additional factor that helps define the phenomenon. The research was carried out in conjunction with collectives of Romanian medical universities.

Alternative therapies, including bariatric surgery, have been created as a result of the failure of conventional treatments like diet, exercise, and medication to provide long-term therapeutic benefits on obesity, diabetes, and dyslipidemia. At this time, restrictive bariatric surgical procedures are used by Metabolic Surgery. These procedures include gastric banding, sleeve gastrectomy, gastric plication, gastric balloon, and gastric bypass. Excision of the stomach along the greater gastric curve is required for sleeve gastrectomy, which is followed by the development of a tubular gastric pouch. On the other hand, the larger curvature of the stomach might be invaginated in order to perform a procedure called gastric plication. Regulation of hormones involved in digestion, such as ghrelin and leptin, is another possible

method for weight management in people suffering from obesity. This method might be used in conjunction with other weight control methods. In this respect, we participated in five research studies aimed at assessing weight changes following different techniques of bariatric surgery by performing in-vivo and ex-vivo trials. The overarching goal of these investigations was to find out how patients' weights changed after having bariatric surgery. The members of the surgical clinic two at the University of Medicine and the pharmacy in Timisoara worked together very well, which made it feasible for them to prepare the paper.

Surgical considerations in the oncology of the abdomen are the topic of the second section of the study findings that are discussed in this article. The subspecialty of surgery that deals specifically with cancer patients and their conditions are known as surgical oncology. Radiation and different local ablative therapies make up the other two, which are known as systemic therapy and radiation, respectively. Radiation treatment, either alone or in combination with chemotherapy, has the potential to cure some forms of cancer, hence removing the need for invasive surgical procedures. These cancers include head and neck cancer and anal carcinoma. According to some authorities, colorectal cancer (CRC), which is the third most prevalent form of cancer in the world, is the main cause of mortality among female cancer patients after lung cancer and/or breast cancer. CRC is one of the most common types of malignancy. The prognosis is better for patients who are diagnosed with colorectal cancer at an earlier stage. After a diagnosis of colorectal cancer, the likelihood of surviving the illness is highly correlated with the stage of the disease, the growth of the tumor locally, the involvement of lymph nodes, and the presence of distant metastases. In spite of this, there is still a significant amount of diversity in the effectiveness of therapy from patient to patient.

There was a consistent movement toward the partition of the field of activity in a few different subspecialties of general surgery, which was most likely advantageous for patients as a whole. Nevertheless, there is almost always a cost associated with every reform that is for the better. Many general surgeons no longer feel confident doing major gynecological procedures with the introduction of gynecology as a highly specialized discipline and gynecological oncology as an even more specialist branch of gynecology. In addition to this, it is quite likely that this pattern may be extended beyond the dissections of the female pelvis. No matter how extensive a general surgeon's practice is at the moment or how many colleagues

one has access to, those of us who work in this industry will inevitably run into situations in which an in-depth knowledge of gynecology and obstetrics will be extremely helpful. This is true even if we have access to a lot of other specialists. One obvious example would be pregnant patients who have any form of general surgical problem during their procedure. In addition, patients who have gynecological cancers are more likely to develop intestine difficulties or problems associated with enteric involvement before, during, or after getting oncological therapy. This is because gynecological cancers affect the reproductive system. My participation in this endeavor encompasses four different research initiatives that have focused on hysterectomies, breast cancer, endometriosis, and infertility, respectively. The acceptance and implementation of a multidisciplinary team pave the way for the input and engagement of a general surgeon in gynecological surgery, which may also be helpful to the patient. Beginning with the concept of advancing less invasive surgical techniques, The information that covers in full the surgical elements of radical hysterectomy, the treatment of endometriosis, as well as therapeutic choices in malignancies in the gynecological sector has been authored by us.

Taking into consideration these professional and academic foundations, to which I have added the experience that I gained through the study that was emphasized, I have a growth plan that is well-structured. Bringing teaching and knowledge acquisition, greater openness to students in terms of access to hands-on facilities, and where they can or already exist to improve their access or quality; student scientific circles are a great example of professionalism, and adapting the study program of the students in conjunction with the drafting of new textbooks for both courses and clinical internships is a part of it. Adapting the study program of the students in conjunction with the drafting of new textbooks for both courses and clinical internships is another part of it. This curricular and organizational reform has the potential to lay the groundwork for post-residential overspecializations and has the potential to lead to the accreditation of the university, clinic, and hospital as training centers for surgical overspecializations, multidisciplinary teams in the way they are established, how they collaborate, and how they are implemented in current clinical practice.

Due to the vast amount of information that is now available, information that is distinct to each medical specialty, the idea of multidisciplinary is absolutely necessary for the current state of medical activity. Their need is self-evident,



irrespective of the specific subfield that is being discussed, whether that of vascular access, endocrine surgery, or oncological surgery, respectively. These goals can be accomplished in the future through the financial resources that are already available at the university, through the resources that are available at the ministries of education or health, or through projects that are funded by European funds and that bring about the desired level of coverage and results. Last but not least, the habilitation thesis is finished and brought to a close by the list of bibliographic references.

## LIST OF 10 REPRESENTATIVE SCIENTIFIC PAPERS

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