

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



**ANATOMO-CLINICAL AND INTERDISCIPLINARY
CORRELATIONS REGARDING THE NORMAL AND
PATHOLOGICAL APPEARANCE OF SOME
ANATOMICAL ELEMENTS**

ABSTRACT

Prof. univ. dr. BOLINTINEANU SORIN-LUCIAN

Timișoara

2023

This habilitation thesis is focused on the most important achievements in the science field, as well as in the academic and professional activity. It is divided into four major sections: in the first section, the scientific achievements are described. I introduce myself, Bolintineanu Sorin Lucian, as a medical doctor and after this, as an anatomy professor at the University of Medicine and Pharmacy Victor Babes Timisoara. In the second section I present the most important, but of course, not the only ones, directions of scientific studies. I have published many articles in different national and international journals, having 37 publications in the ISI System, with 171 citations and a Hirsch Index of 8 (Web of Science-Core Collection). The third section presents several other activities, such as interdisciplinary collaborations, student-teacher collaborations and extracurricular activities. The last section contains the future academic and scientific perspectives.

My journey in the medical field started as a General Practitioner at the Moldova Noua Municipal Hospital, where I gained foundational clinical skills. An important phase of my career happened during a medical internship at Clinical Hospital No. 1 in Timișoara from 1993 to 1994, where I further enriched my clinical expertise.

In 2003, I achieved the significant milestone of achieving Doctor's title in Medicine and my educational journey began in 1994. Since the year of 2017 I serve as a Professor in the Anatomy and Embryology Department, contributing to the educational landscape. Throughout my career I wanted to have a say into advancing medical knowledge, therefore I have authored numerous research articles published in reputable journals. Additionally, my active participation in national and international conferences listed in this habilitation thesis has provided a platform to share insights and findings.

In my role as a professor at the department of anatomy I also work closely with students in different science groups. I coordinated more than 40 disseration thesis of students from the master's study programs in the field of Medicine. I have guided them step by step, sharing my experience and making sure they feel confident in their research and writing. I also co-supervised the research activity of students, which resulted in posters at different national conferences.

My primary scientific research focus encompasses the subjects of plastination, dissection, morphopathology intricated with anatomy, and obstetrics&gynecology. These areas represent not only my academic pursuits but also areas where I bring practical experience to the classroom. As I continue on this professional trajectory, my dedication to bridging clinical and academic directions will remain unchanged and my aim will be to make learning practical and interesting

The first part of my scientific activity has focussed on conservation techniques. Plastination is a unique preservation technique employed in the study of anatomy. In essence, it involves replacing bodily fluids and fats with special plastics, transforming once perishable tissues into durable specimens. This method enables a sustained and detailed examination of anatomical structures without the risk of decay or alteration.

By utilizing plastination, researchers and educators gain a profound understanding of intricate body parts, such as muscles and organs. This preservation process offers a tangible and in-depth exploration of anatomy, allowing for a hands-on approach to learning. Beyond the classroom, plastination plays a crucial role in advancing medical research, providing doctors and scientists with invaluable insights into the intricacies of the human body, ultimately contributing to advancements in healthcare and medical knowledge.

Another direction of studies have been represented my microscopical studies using anatomy in describing the clinical features of different pathologies. Morphopathology, in conjunction with anatomy, delves into the intricacies of structural abnormalities within the human body. It serves as a diagnostic tool in observation of the alterations that occur at the microscopic level when the normal harmony of our body components is disrupted. The integration of morphopathology with anatomy provides a comprehensive understanding of both the standard and aberrant configurations within our physiological framework. This holistic approach allows for the exploration of deviations from the norm, helping other medical professionals in recognizing, diagnosing, and treating various health conditions. Essentially, morphopathology intricated with anatomy serves as a key to unraveling the mysteries of the human body, providing insights that are pivotal in advancing medical knowledge and enhancing healthcare practices.

Dissection represents a meticulous investigative process that involves the systematic exploration of the human body through careful disassembling of its anatomical structures. It serves as a methodical examination, having the purpose to uncover the intricacies of organs, tissues, and other vital components.

In my dedicated focus on dissection, I study of individual anatomical elements, such as muscles, bones, and organs. It entails a comprehensive scrutiny of the structural and functional attributes, akin to dissecting the intricate design of our biological framework. This depth of understanding is indispensable for medical practitioners and researchers, providing an insight of the body's composition and facilitating precise diagnostics and treatments. In essence, the study of dissection is a sophisticated means of unlocking the secrets encoded in the human form, advancing medical knowledge and practice.

In my study of women's health, I focus on two important areas: obstetrics and gynecology, and I connect it all with the study of anatomy. Obstetrics, in its essence, concentrates on the captivating processes of pregnancy and childbirth, unraveling the complexities of these experiences. In the same time, gynecology extends its directions to encompass the holistic well-being of women, emphasizing the health of reproductive organs and systems. This two different ways provide a panoramic view, leading to a nuanced understanding of the physiological intricacies present in the female body.

Within this framework, the integration of obstetrics and gynecology with anatomy serves as a navigational tool through the anatomical intricacies of the female reproductive system. It involves a meticulous examination of structures such as the uterus and ovaries, elucidating their functions and dynamic changes across various life stages. This depth of knowledge becomes instrumental for medical practitioners, offering an insight into women's health, facilitating management of issues related to pregnancy, childbirth, and the broader spectrum of reproductive well-being. Thus, my direction of study not only involves the mastery of women's health intricacies but also underscores the profound relationship between anatomy and the different biological experiences unique to women.

As main purposes of my personal development plan, I would like to mention the following:

1. I would like to incorporate advanced imaging techniques and data visualization tools to explore and understand anatomical structures in greater detail

2. I would like to continue to collaborate with medical imaging departments to integrate advanced imaging techniques into anatomical research and education.

3. I would like to investigate the impact of interdisciplinary and integrated curricula on students' ability to apply knowledge across different medical specialties and promote a complex understanding of patient care

4. I would like to publicate articles in ISI rated journals, preferably in those with red or yellow zone within their scientific field

4. I also want to establish connections with the local community of our beautiful town, healthcare institutions and other non-medical universities, and industry partners.

Therefore, after presenting the medical and scientific achievements and vast experience, and also several future directions, I sincerely hope to be able to fulfill the plans I have for my development within the University of Medicine and Pharmacy Victor Babes Timisoara