

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

**HABILITATION THESIS ABSTRACT
MINIMALLY INVASIVE SURGERY: INNOVATION
AND EFFICIENCY IN THE TREATMENT OF
PARIETAL AND DIGESTIVE PATHOLOGIES"**

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The habilitation thesis, “**Minimally Invasive Surgery: Innovation and Efficiency in Treating Parietal and Digestive Pathologies,**” adheres to the standards specified by the National Council for the Recognition of Degrees, Diplomas, and University Certificates (CNATDCU) and the Doctoral Studies Council of the University of Medicine and Pharmacy “Carol Davila” in Bucharest. This work provides a comprehensive account of my professional and scientific journey from the time of completing my PhD in 2013 up to the present.

Chapter 1 opens with an in-depth look at my professional background, tracing my journey from early education through high school, medical school, and into a competitive residency program, marking the beginning of my specialization in surgery. Motivated by a dedication to medicine and a commitment to advancing foundational knowledge, I focused on a core science critical to all surgical disciplines. This foundation has allowed me to understand complex pathologies and approach surgical challenges with both scientific rigor and clinical insight. The chapter also details how each educational and professional milestone has shaped my approach to patient care and academic research, highlighting the importance of integrating practical skills with theoretical knowledge. Through this chapter, I aim to offer a comprehensive view of my journey and the motivations driving my commitment to innovation and excellence in minimally invasive surgery.

Chapter 2 highlights my scientific and academic accomplishments, organized chronologically to illustrate key phases of my professional development. Since beginning my university career, my research has spanned colorectal and endocrine surgery, hernia repair, minimally invasive procedures, and molecular medicine. This multidisciplinary focus has enhanced the impact and breadth of my work in both clinical and research settings. Over the years, I have contributed significantly to the academic literature, achieving substantial publication milestones across various respected journals and scientific platforms. My work is categorized as follows:

Articles published in ISI journals with an Impact Factor (IF): 33 articles

18 as the primary author

15 as a co-author

Articles published in ISI journals without an IF, in PubMed, or ISI Proceedings: 15 articles; 8 as the primary author; 7 as a co-author

Articles in journals indexed in other international databases (BDI): 3 articles

Abstracts published in ISI Web of Science Clarivate-indexed journals with an Impact Factor: 88 abstracts

Abstracts published in ISI Web of Science Clarivate-indexed journals without an Impact Factor: 19 abstracts

Abstracts published in journals or scientific event proceedings with ISBN or ISSN: 107
abstracts

Following this, I highlight 10 representative papers, each contributing valuable insights into surgical and medical research, covering topics from incisional hernia techniques to cancer stem cell studies and collagen metabolism:

1. **Rives Technique, A Gold Standard for Incisional Hernias – Our Experience;** V. Strâmbu, P. Radu , M. Bratucu , D. Garofil , C. Iorga , R. Iorga , F. Popa; Chirurgia 2013.
2. **Specific Septic Complications after Rectal Cancer Surgery: A Critical Multicentre Study;** Călin Popa ,Virgiliu-Mihail Prunoiu, Paul Puia, Diana Schlanger ,Mircea-Nicolae Brătucu ,Victor Strâmbu ,Eugen Brătucu ,Hortensia-Alina Moisă ,Eduard-Georgian Chiru ,Bogdan Vasile Ileanu and Petre Radu; Cancers 2023.
3. **Molecular Factors of Failure in Incisional Hernia Surgery;** P. Radu, M. Bratucu,D. Garofil, C. Pasnicu, C. Iorga, F. Popa, V. Strâmbu; Chirurgia 2013.
4. **Interstitial Cells of Cajal—Origin, Distribution and Relationship with Gastrointestinal Tumors;** Petru Radu ,Mihai Zurzu ,Vlad Paic ,Mircea Bratucu ,Dragos Garofil ,Anca Tigora ,Valentin Georgescu ,Virgiliu Prunoiu ,FlorianPopa ,Valeriu Surlin and Victor Strambu; Medicina 2022.
5. **Groin Hernia Repair during the COVID-19 Pandemic—A Romanian Nationwide Analysis;** Nicolae Dragos Garofil , Mircea Nicolae Bratucu, Mihai Zurzu, Vlad Paic , Anca Tigora , Virgiliu Prunoiu , Alexandru Rogobete , Ana Balan ,Cristian Vladescu , Victor Dan Eugen Strambu and Petru Adrian Radu; Medicina 2023.
6. **The Role of Collagen Metabolism in the Formation and Relapse of Incisional Hernia.** P. Radu, M. Brătucu, D. Garofil, V. Goleanu, F. Popa, V. Strâmbu; Chirurgia2015
7. **The Impact of Cancer Stem Cells in Colorectal Cancer.** Petru Radu, Mihai Zurzu, Anca Tigora, Vlad Paic, Mircea Bratucu, Dragos Garofil, Valeriu Surlin, Alexandru Claudiu Munteanu, Ionut Simion Coman, Florian Popa, Victor Strambu and Sandu Ramboiu; IJMS 2024.
8. **Parathyroid Cancer—A Rare Finding during Parathyroidectomy in High Volume Surgery Centre;** Petru Radu,Dragos Garofil ,Anca Tigora,Mihai Zurzu,Vlad Paic ,Mircea Bratucu ,Mircea Litescu ,Virgil Prunoiu ,Valentin Georgescu ,Florian Popa ,Valeriu Surlin and Victor Strambu; Medicina 2023.
9. **CD34—Structure, Functions and Relationship with Cancer Stem Cells;** Petru Radu, Mihai Zurzu, Vlad Paic , Mircea Bratucu, Dragos Garofil, Anca Tigora,

Valentin Georgescu , Virgiliu Prunoiu, Costin Pasnicu, Florian Popa, Petra Surlin, Valeriu Surlin and Victor Strambu; Medicina 2022.

10. **Preoperative risk factors in hernia recurrence: a single-center study;** Anca Tigora, Vlad Paic, Dragos Nicolae Garofil, Mircea Nicolae Bratucu, Mihai Zurzu, Daniela Nuta, Florian Popa, Valeriu Surlin, Stefan Patrascu, Victor Strambu, Petru Adrian Radu Strambu V, Garofil D, Pop F, Radu P, Bratucu M, Popa F; JMMS 2024.

A key focus in **Chapter 2** is my doctoral thesis, “**Incisional Hernias – Limits and Possibilities,**” which examines the high incidence and complex nature of incisional hernias post-abdominal surgery. Based on data from 956 abdominal surgeries I performed—of which hernia repairs constituted 6-7%—the thesis explores treatment variations, recurrence rates, and contributing factors, distinguishing between technical and biological influences. The study evaluates surgical outcomes, highlights the limitations of existing techniques, and proposes improvements in therapeutic approaches to reduce recurrence rates and enhance patient outcomes.

Chapter 3 of the thesis outlines my contributions to academia, spanning a range of instructional and administrative responsibilities. This includes developing teaching materials, supervising student projects, supporting scientific presentations, and overseeing examination processes for admissions, graduations, and promotions. My efforts also extend to various managerial and administrative duties aimed at strengthening the educational framework.

The **last chapter** of the thesis presents a detailed vision for my professional development, focusing on both education and scientific research. The educational plan aims to elevate the quality of study programs and teaching processes in alignment modern standards, ensuring the resources necessary for delivering high-quality education. This chapter also outlines my future goals in clinical practice, with an emphasis on refining surgical techniques, particularly in colorectal, abdominal wall hernia and minimally invasive surgery.