

**UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE  
„CAROL DAVILA” BUCUREȘTI  
ȘCOALA DOCTORALĂ  
DOMENIUL MEDICINĂ**

**Rolul raportării rezistenței antimicrobiene (AMR) a  
uropatogenilor în managementul  
infecțiilor de tract urinar**

**REZUMATUL TEZEI DE ABILITARE**

**CANDIDAT:**

**Conf. Univ. Dr. PETCA Răzvan – Cosmin  
Universitatea de Medicină și Farmacie „Carol Davila” București**

**ANUL**

**2024**

## ABSTRACT

The Habilitation Thesis entitled "The Role of Antimicrobial Resistance (AMR) Reporting of Uropathogens in the Management of Urinary Tract Infections" is structured into three sections, in accordance with the recommendations of National Council for University Titles, Diploma and Certificates (CNATDCU) Romania and our national legislation.

The first section encapsulates the academic, scientific, and research activities, chronologically detailing the milestones of my medical and educational career, alongside the most significant publications, research grants obtained through competitions, monographs, and scientific articles published in national and international journals, as well as received awards. Affiliations with specialized scientific societies are also presented through the lens of clinical activity,

I graduated from the Faculty of Medicine of the University of Medicine and Pharmacy Târgu Mureş in 2003. Following the National Residency Examination in November 2003, I secured a position as a medical resident in the field of Urology, undergoing training at the Department of Urology, "Prof. Dr. Theodor Burghele" Clinical Hospital in Bucharest. Subsequently, I passed the specialist urologist examination in 2008 and achieved the status of board-certified urologist in 2014.

My career in academia commenced in 2012, with the role of Assistant Professor at the Department of Urology, "Prof. Dr. Theodor Burghele," Clinical Hospital within the Faculty of Medicine at the University of Medicine and Pharmacy "Carol Davila" in Bucharest. Through competitive selection processes, I advanced to the position of Lecturer in September 2019 and then attained the rank of Associate Professor in February 2023.

During my professional medical journey, I have continuously sought to enhance and expand my expertise by attending various advanced training courses and obtaining multiple complementary study certificates. Noteworthy among these are courses in Extracorporeal Shock Wave Lithotripsy, Radiological Protection in Diagnostic and Interventional Radiology, General Ultrasonography – Levels I + II, Uro-Gynecology, and Healthcare Management.

Since the inception of my medical career and up to the present day, I have consistently participated in numerous national and international congresses, serving as both an invited lecturer and a participant, delivering oral presentations and presenting posters, some of

which have been honored with awards. Additionally, I am a member of multiple national and international professional scientific societies.

My doctoral thesis, under the mentorship of Professor Gheorghe Burnei, entitled "Treatment of Malignant Bone Tumors in Children and Adolescents," was publicly sustained in 2016 at the Doctoral School of the University of Medicine and Pharmacy "Carol Davila" in Bucharest. This event marked the successful culmination of an initial phase, spanning from 2012 to 2016, characterized by diligent and sustained research and documentation efforts. These accomplishments were subsequently cultivated and continuously improved, leading to significant outcomes in the medical field. Such achievements facilitated their publication in high-impact national and international ISI-indexed journals.

My research contributions are highlighted by the publication of 68 articles indexed in Clarivate's Web of Science, with impact factors, along with 18 additional articles indexed in Clarivate's Web of Science without impact factors, all presented in full length. Furthermore, I have published 79 full articles in international and national journals indexed in global databases. Additionally, 52 abstracts have been featured in the proceedings of major international conferences in the field, as well as abstracts of papers presented at international conferences, alongside 86 abstracts published in the context of national conferences. I have actively participated as a member in two research grants and 52 national and international clinical trials, serving either as a principal investigator or sub-investigator. Moreover, I have contributed as a Reviewer for national and international journals, with my reviews accessible through my profile on the Web of Science Researcher ID - [AAH-2462-2020](#).

My academic journey has been further enriched, particularly during the postdoctoral period, by editorial activities, including co-authoring two treatises and authoring or co-authoring six monographs. Notably, among these publications the book "Clinical Urology for Residency Training," edited by Acad. Ioanel Sinescu, published by University Publishing House "Carol Davila" in 2022, is a cornerstone resource for novice colleagues embarking on their urological careers.

The second section outlines the directions for further developing my academic and scientific research career, building upon previous studies and finalized or ongoing research projects.

In my ongoing pursuit of success in teaching, research, and medical practice, I will prioritize, as I have consistently done, the adherence to principles and standards of professional ethics and deontology, following fundamental values such as academic

freedom, personal autonomy, equality, meritocracy, justice and equity, professionalism, honesty, intellectual integrity, transparency, respect, tolerance, and last but not least, accountability.

A successful professional career is cultivated through the promotion of teamwork: the collaboration of academic staff, the partnership between academic staff and students, academic staff and residents, as well as academic staff and medical personnel. Respect for competence and professionalism in medical, research, and educational activities must be present in all circumstances, including exceptional situations such as those encountered during the period from 2020 to 2022 amidst the COVID-19 pandemic caused by the SARS-CoV-2 virus.

Building upon the experience accumulated thus far, I would like to outline the following specific research objectives:

1. Implement interventions with tangible impact in both inpatient and outpatient clinical settings to mitigate the rapid rise of antibacterial resistance significantly.
2. Investigating antimicrobial nanoparticles as potent bioagents to tackle the increase of antimicrobial resistance among pathogenic agents.
3. Examination of Holmium laser enucleation of the prostate as a novel "gold standard" procedure, independent of size (HoLEP).

My past academic and scientific pursuits and the maturity achieved over years of professional advancement in the medical field serve as a solid foundation for future scholarly trajectories. The depth of research attained through the construction of this scholarly portfolio will serve as a cornerstone of my evolution and significantly contribute to the success of forthcoming projects within the University of Medicine and Pharmacy "Carol Davila". I aim to sustain my contribution as a member of the academic community within this prestigious and tradition-rich institution, enhancing its standing both nationally and internationally.

The third section contains the studied bibliographic references, which have contributed to developing and endorsing this work.