

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



**LABORATORY MEDICINE, FROM BASIC RESEARCH
TO CLINICAL APPLICATIONS**

ABSTRACT

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My name is Horhat Florin and I was born in Arad in 1977. In 1995 I graduated from Elena Ghiba Birta High School in Arad, and I was admitted to the Faculty of Medicine.

I was attracted to microbiology from the beginning. I started working with Prof. Roxana Moldovan and I had the opportunity to join his teaching and research team. I was extremely excited and focused my resources and skills in this direction.

I graduated from the Faculty of Medicine in 2001 and began my doctoral studies in 2006. My doctoral thesis "Evolutionary trend of Gram-negative bacteria that secrete broad-spectrum beta-lactamase in a tertiary hospital" was presented in 2010 under the scientific coordination of Prof. Roxana Moldovan and was confirmed by the Order of the Ministry of Education no. 5729 of 24.11.2010.

This paper, the habilitation thesis, is divided according to academic standards into four parts: (i) the first part is dedicated to scientific activity, (ii) the second part is dedicated to academic activity and academic achievements (iii) the third part is dedicated to professional activity and (iv) the last part contains the academic career development plan.

The habilitation thesis, entitled " Laboratory Medicine, from Basic Research to Clinical Applications" represents the quintessence of my professional, scientific and academic activity, especially referring to the achievements acquired after the conferral of the PhD in Science title in 2010. The PhD dissertation had microbiology as domain and "***Evolutionary trend of extended-spectrum beta-lactamase-secreting Gram-negative bacteria in a tertiary hospital***" as theme and title.

Chapter 1 covers the main areas of research, presenting original studies, books, articles published in ISI or BDI indexed international journals and scientific papers presented at national and international congresses, in the current scientific context of the microbiology domain. In recent years, I have been particularly interested in the research of the following topics: general microbiology, clinical microbiology, multidrug resistance, genotype-phenotype of multidrug resistant bacteria, therapeutic approaches against multidrug resistant bacteria, including antibiotics and antimicrobial fitocomponents, virology, HPV, laboratory incorporation into everyday clinical practice.

The researches are original, innovative and valuable because they further our understanding of the fields of clinical microbiology specifically and laboratory in general, by more modern approaches.

This chapter also contains materials of interest, others than those related directly to clinical microbiology. Original and innovative papers in secondary research areas for which I was main author and important mass dissemination methods such as textbooks.

This chapter continues as I go on to talk about my scientific development and achievements and national professional recognition. Throughout all my professional, medical, scientific and academic career, I have participated in numerous national and international congresses, both with oral presentations, but also as an invited speaker, disseminating the results of my post-doctoral researches. I am a peer-reviewer for numerous ISI/BDI indexed national and international journals. I was awarded nationally as a recognition of my professional and scientific merits.

Regarding the relevance and impact of my scientific results, the chosen research themes approach several directions and aspects of clinical microbiology, with complex integrative and multidisciplinary interferences, reflected in published books and articles that prove originality, actuality, synthesis capacity, scientific concept integration, high scientific level, but also a comprehensive, complex approach. So, I have written and published books in CNCSIS recognized publishing houses: 9 treatises as co-author or as a member of the editorial team.

I have published 37 articles in extenso, as principal author or in collaboration with other authors, in ISI-rated scientific journals with impact factor and 32 articles in extenso in BDI, international databases indexed scientific journals. I have published 37 articles in ISI, BDI indexed summaries, with ISSN/ISBN. Publications from various ISI international journals have been of scientific impact and recognized, accumulating a total of 620 citations in the ISI Web of Science system and a Hirsch index, h-index=11. I have carried out research activities in the framework of grants won through national and international competitions and through pateting prizewinning 2 electrical devices.

Chapter 2 includes aspects of academic evolution and achievements. So, I went through all the stages of the academic hierarchy, and after the competition, in 2017, I became Lecturer in the Microbiology- Virusology Discipline, Department of Microbiology

at the „Victor Babeș” University of Medicine and Pharmacy in Timișoara. I have been involved in modernizing and adapting the didactic activities in line with current requirements and international models. I have developed teaching materials and introduced new courses on previously not elaborated before directions. I organized workshops for students/resident doctors and coordinated papers presented by students/resident doctors at scientific events and numerous diploma papers.

Chapter 3 incorporates the evolution and the main post-doctoral professional achievements. In 2011, I became a Primary Medic, in Laboratory Medicine and in 2018, a Senior Specialist in Clinical Microbiology. In 2017, I became Head of Clinical Laboratory and Clinical Microbiology at the Emergency Hospital for Children "Louis Țurcanu", Timișoara. The management and leadership experience is proven by the fact that: from 2009 I am Head of Clinical Microbiology at Medlife Romania, Timisoara and have also achieved certification after following the Complementary Studies in the Management of Public Health Services in 2014. My skills and ability to lead or engage in research projects are also proven through the winning of grants - 2 as Director and 1 as team member.

Chapter 4 elaborates evolution and development plans of the professional, didactic and research career. The later achievements, allow me to step further into translating the scientific innovations from fundamental research to clinical practice and give me the opportunity of education in high-level medical research. I want to continue the research in the field of, already started also in research projects. I will continue, as my moral duty to promote high standards for the medical and university education of resident doctors and students. I want to combine both clinical practice and research, involve new generations of students and resident doctors, and to support the development of Microbiology Discipline. Through the future coordination of doctoral theses, I will boost the work of new PhD students and the dissemination of doctoral research results, in the national and international scientific environment together with increasing the visibility of the University. I will continue to support multidisciplinary, interdisciplinary collaboration and innovative, evidence-based research.

The bibliographic references, used to integrate the research activities described in previous sections, are written at the end of this paper.