

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



**HUMAN IDENTIFICATION: FROM GENETIC  
PROFILE TO DNA PHENOTYPING**

**ABSTRACT**

**Lecturer Dumache Raluca-Oana**

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My name is Dumache Raluca-Oana. I was born in 1979 in Timisoara. In 1998, I graduated from "Constantin Diaconovici Loga" National College and started the study of medicine at "Victor Babes" University of Medicine and Pharmacy from Timisoara.

From the first years of college, I was attracted to the preclinical disciplines such as, biochemistry and genetics. In 2004, I graduated from the Faculty of Medicine and, two years later, in 2006 I started my doctoral studies. During my doctorate, the field of interest I chose was epigenetics. The title of my doctoral thesis is "New tumor biomarkers used in the prognosis, diagnosis and therapeutic guidance in prostate cancer" defended in 2010, under the scientific coordination of Professor Dr. Maria Puiu and was confirmed by the Order of the Minister of Education No. 4387 dated 06.06.2011.

The habilitation thesis with the title "Human identification: from genetic profile to DNA phenotyping" concludes my entire professional, scientific and academic activity up to now and presents my scientific, research, medical and academic achievements that were obtained after receiving the title of doctor in medical sciences in 2011.

The habilitation thesis is divided according to academic standards into four parts: 1) the first part refers to my scientific activity; 2) the second part refers to my teaching activity and academic achievements; 3) the third part refers to professional activities; 4) the last part includes the plans regarding the development of my academic career.

In **chapter 1** of the habilitation thesis, the research fields are presented, along with original studies, articles published in international ISI journals, books published by international publishing houses, scientific works presented in international and national conferences. After finishing my doctorate, I was interested following fields of research: oncogenetics, pharmacogenetics, forensic genetics in human identification and DNA phenotyping in the establishing of person's external features (hair colour, face colour, estimated age). In addition, other original articles published in international ISI journals to which I am a co-author are presented.

My scientific development, achievements and national and international scientific recognition is described there. Throughout my professional, scientific, medical and academic career, I participated in national and international congresses. I have participated with oral papers as well as a guest, disseminating in this way the results of my post-doctoral studies. In 2011, I was awarded the Balkan Award for Clinical Laboratory Research at the Balkan conference of laboratory medicine. In 2016, I was awarded the "Eugen Mody" Award of the Association of Medical Laboratories in Romania. These national and international awards serve as recognition for my professional merits.

Regarding the relevance and impact of the scientific results disseminated by me, the research topics address several directions of molecular genetics with multidisciplinary interfaces. The result of my research was published in books and articles published both in the country and abroad. I have published 2 monographs in international publishing houses and authored 7 chapters. I have also published a number of 3 monographs in national publishing houses recognized by CNCSIS.

I have published a number of 40 full-length ISI articles as main author or co-author in international or national ISI rated scientific journals with an impact factor, as well as 8 BDI articles. I have published a number of 48 full articles in international and national journals ISI, BDI with ISSN/ISBN.

A total number of **65** publications from international journals accumulated a total number of citations of **382** in the ISI Web of Science system and a Hirsch index, **h-index=12**. I carried out numerous research activities within the framework of national grants, being an internal project director within the UMFVB.

In **chapter 2**, the aspects of the evolution and academic achievements are presented. After passing through the stages of the academic hierarchy in 2015, following the competition I became senior lecturer at the discipline of legal medicine, bioethics, deontology and medical law. I got involved in adapting and modernizing didactic activities in accordance with international standards and requirements. I have organized numerous workshops and seminars for students and residents, I have coordinated papers presented by students in scientific conferences, I have coordinated diploma and dissertation papers.

**Chapter 3** presents the evolution and the main post-doctoral achievements. Thus, in 2015 I became a primary doctor in laboratory medicine, and in 2019 I became a specialist in medical genetics. In the period 2011-2014, I was employed in the Central Analysis Laboratory of the "Pius Brnzeu" Timisoara County Emergency Clinical Hospital. Since 2014, I have been working with clinical integration within the Timisoara Institute of Forensic Medicine, where I founded the laboratory of forensic genetics.

In **chapter 4**, the plans for the evolution and development of my professional, teaching and research career are presented. I still want to continue research in the field of genetics and laboratory medicine. I want to promote quality standards for the medical and university education of doctors, students and residents. Through the future coordination of doctoral theses, I will get involved in their activity and the dissemination of doctoral research results in the national and international scientific environment together with

increasing the visibility of the "Victor Babes" University of Medicine and Pharmacy Timisoara.