

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

**VESTIBULAR PATHOLOGY – A FIELD OPEN TO
CONTINUOUS PROGRESS IN CLINICAL RESEARCH
ABSTRACT**

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ABSTRACT OF THE HABILITATION THESIS

The rehabilitation thesis entitled **“Vestibular pathology – a field open to continuous progress in clinical research”** describes my scientific, academic and professional pathway followed after obtaining the title of Physician Doctor in Medicine with theses “Diagnostic Value of Electronystagmography, Dynamic Computerized Posturography and CranioCorpoGraphy in Diagnostic of Vestibular syndromes”. My PhD thesis was the first PhD theses in the field of Vestibulology, original not only due to the research issue, but also due to its research methodology.

The passion developed for vestibular pathology during my doctoral research led me to focus my medical and research activity in the field of Audiology and Vestibulology, recognized subspecialties of the ENT specialty, and after completing my doctorate in medicine.

The fascinating functionality of the inner ear, both in terms of hearing and maintaining balance, attracted me as well, as it conquered a large number of doctors and researchers in the specialties of ENT and Neurology, worldwide.

I was practically the second physician in Romania who dedicated himself to Vestibular Pathology, which motivated me to have a top professional level, to be able to open this pathway of ENT specialty also in Romania.

Through personal effort, I participated in international courses and workshops supported by European and American leaders in the field, in order to start this scientific and academic endeavor from internationally recognized the top level.

Along with Vestibular Pathology, I also included in my area of professional interest Audiology, another young subspecialty of ENT.

I considered that I must approach the inner ear completely, both from the auditory and vestibular point of view, the pathologies being often associated and intricated, in the patient's symptomatology. Usually, worldwide “specialists” address only one of the functions of the inner ear. However, having the advantage of working in the Department of Audio-Vestibular Functional Explorations at the "Prof. Dr. Dorin Hociotă" Institute of Phono-Audiology and ENT Functional Surgery from Bucharest (IFACF-ORL), fully equipped for both auditory and vestibular investigations, I chose to take advantage of this opportunity.

Due to my involvement and dedication in the medical, didactic and research activity of IFACF-ORL, I have been included since the beginning of their initiation in Romania in

the National Cochlear Implant Program (through which hearing is restored to deaf patients) and in the National Newborn Hearing Screening Program, extremely important National Program considering the very high frequency of congenital deafness (1-3‰ live newborns, i.e. 100-400 newborns/year at the birth rate of Romania), as well as the devastating impact of congenital deafness for the subsequent development of the patient - the appearance of the second disability (mute), non-integration into mass communities (people being characterized by oral communication), very limited academic access, very poor employment opportunities, social isolation, frustrations and self-doubt.

Being involved in the National Program for auditory rehabilitation through cochlear implant and being extremely interested in vestibular pathology, I introduced in Romania and joined the pioneers in the field in the world in the investigation of vestibular function in cochlear implant candidates, monitoring vestibular function pre- and post cochlear implantation. Auditory and Vestibular pathology represented the core of my professional, academic and research activity, aiming to offer to Romanian patients' same health care services as in the most developed countries, and a good quality of life, and actualized information in these fields to my colleagues from ENT or other specialties (Neurology, General practitioners, Infectious disease physicians).

I presented all these aspects of my activity as a clinician, teaching staff and researcher in the habilitation thesis, in separate chapters, to allow a parallel appreciation of my activity, respecting the structure recommended by "Carol Davila" University of Medicine and Pharmacy from Bucharest (UMPhCD).

Chapter I - presents the scientific activity, characterized by specialized scientific works published in national and international journals, ISI Thompson or IDB, as well as by active participation in national and international conferences in the field, both with communications, but also with Keynote presentations and courses.

These participations allowed me personally to be included in the international scientific community, and for fellow ENT or neurologists in the country to discover vestibular pathology, to learn the methodology of examining patients with vertigo, dizziness or balance disorders. I believe that the large number of ENT residents and young specialists from the country who applied for the Audiology internship with me or participated in the postgraduate courses organized by UMPhCD are proof of the positive effect of my active participation in conferences.

The research activity, constant component of my professional activity includes:

- Aminoglycoside ototoxicity – Partner Director in a National Research program won in competition. (PN II, Partnership section 2008 nr. 42-167/2008);
- Hearing screening in preschool and school-age children;
- Hearing loss due to congenital cytomegalovirus infection;
- Evaluation of hearing benefit in hearing aided patients through cortical auditory evoked potentials;
- Vestibular rehabilitation through virtual reality.

Results of these research interests consists of 17 ISI Thompson Reuters articles (11 as main author and 6 as co-author), 6 Hirsch index and 126 Web of Science (WOS) citations.

In **Chapter II** I presented the academic course in the University, from the position of ENT Assistant Professor to that of Associate Professor of Audiology, positions won through competition (2000 and 2013).

The academic course was based on the teaching activity carried out in the framework of Audiology and Hearing Aid College (eleven years), part of UMPHCD, Faculty of General Medicine of the UMPHCD (courses and practical sessions for students), Faculty for Medical Nurses and Midwives of the UMPHCD (Head of Discipline of Clinical Audiology and Hearing Aid; Head of Discipline for Specific Care in ENT, Audiology; at present, member of the Discipline of Specific care in Surgery and head of Discipline of Biophysics of New Techniques for Diagnostic and Treatment at the master degree program of Medical Biophysics and Cellular Biotechnology).

Throughout my academic career, I dedicated myself to the promotion of Audiology and Vestibulology among young ENT specialists, considering that both specializations, especially Vestibulology, are at the very beginning in Romania, with a very small number of specialists in the country, although since 2013 the ENT specialty curriculum includes an Audiology internship, unfortunately only for one month.

In recent years (since 2019), an Vestibulology internship was included in the ENT residency curriculum, also for only 30 days.

I have always received residents or young specialists from all university centers in Romania in training courses in the field of Audiology and Vestibulology and I have tried to convey to them the importance of knowing these subfields of a surgical specialty, in order to give them the opportunity to better understand the ENT surgical act, but also to be useful in

their clinical approach to the very numerous patients with audio-vestibular pathology (vestibular pathology alone represents 40% of ENT consultations).

I was the training internship coordinator in Audiology for a colleague from abroad, a former resident in IFACF-ORL, who wanted to deepen the knowledge acquired during the one-month residency internship, before returning to his native country to practice ENT.

The didactic activity also included annual training courses in the field of audiology and vestibulology, always organized through UMPHCD.

I have always created the materials related to my didactic activity (PowerPoint presentations and written support) of the practical works and courses mentioned above and participated in the writing of the exam topics.

Also, from 2000 I annually coordinated bachelor's or dissertation papers for the students of the mentioned forms of education and was annually in the examination committees of specialties and not only (admission Audiology and Hearing Aid College, Faculty of General Medicine, Faculty for Medical Nurses and Midwives), license (Audiology and Hearing Aid College, Faculty for Medical Nurses and Midwives), dissertation (Master's degree in Medical Biophysics and Cellular Biotechnology), specialty ENT exam, admission to doctorate, stage reports and final presentation of doctoral theses.

I was a scientific supervisor for two doctoral theses with a subject in the field of vestibular pathology, coordinated by Professor Dr. Romeo Calarasu.

I have been an invited lecturer at numerous national and international conferences, in organizing committees, and I have also organized conferences with international participation, annually since 2009, conferences with 200-500 participants, including during the COVID-19 pandemic.

Chapter III is dedicated to my professional evolution, with achievements that, in my opinion, certify my professional progress.

After obtaining the title of doctor in medicine (2005), I was recognized as a specialist in the field of Audiology and Vestibular Pathology, being invited to the national ENT conferences to give pre-congress courses or “Keynote lecture” type presentations

I took over the role of leader of the National Newborn Hearing Screening Program in IFACF-ORL from my mentor, Dr. Alexandru Pascu, and coordinator of the training courses organized annually through UMPHCD – “Update on Audio-vestibular investigations”.

I completed my medical activity with courses in the field of management, to be able to perform administrative functions in IFACF-ORL.

The recognition of my professional level also materialized in:

- Coordination of professional training programs accredited by Romanian College of Physicians

- My inclusion in the lectures of free training courses in the field of Vestibulogy, together with renowned international lecturers (Prof. Herman Kingma/The Netherlands, Maastricht University and Prof. Michael Strupp/Germany, München University).

- Invited lecturer at international conferences (ESPO-European Societies of Pediatric Otorhinolaryngology)

- My inclusion in international scientific leadership groups (MEDEL Advisory Board)

All these professional recognitions have morally obliged me to stay at the top of these ENT-specializations, having advanced internships abroad (Department of Otolaryngology, University of Pittsburgh School of Medicine, USA-2009; Equilibrium Center (Zentrum für Schwindel - IFB) Ludwig-Maximilians-University Munich, Klinikum Großhadern, Germany-2012), participating in more than 150 courses, webinars and international workshops

My inclusion in the Special Olympics International (SOI)/Special Olympics Romania (SOR) Foundation as “Healthy Hearing” Clinical Director, a position from which, through voluntary activities, I coordinate and perform annual hearing screening for athletes with Down syndrome (250-400 athletes/year), participants in the Special Olympics National Summer Games.

Last chapter, **Chapter IV**, includes my future plans, starting from a SWOT analysis of my actual level of overall performance.

I wish to have the opportunity to coordinate doctoral research studies in this beloved medical fields – Hearing and Equilibrium pathology. It will be a new challenge which, for sure, will improve my professional profile and also human profile. I hope to support my PhD pupils with international connections for better research programs and new friends.

I believe that Audiology and Vestibulogy deserve special attention from the E Scientific research used in clinical medical practice is a good model in my opinion and I will promote it to my younger colleagues. Medical ethics and deontology which led my entire activity will continue to be very important pillars, for my professional and human self-esteem.

ENT specialty, and I will try to promote and develop the multiple aspects related to them.