

# TEZĂ DE ABILITARE

## CORELATII ECO-MORFO-HISTOLOGICE IN DIAGNOSTIC SI CERCETARE STIINTIFICA

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### ABSTRACT OF THE HABILITATION THESIS

This thesis describes the evolution of my teaching and clinical activity in accordance with the main research areas in which I have been involved.

My professional training as an anatomopathologist, later complemented by competence in the field of general ultrasonography, has shaped my entire teaching and scientific activity. Morpho-pathology has opened up to me an extremely complex perspective on ultrasound imaging investigation, especially in terms of diagnostic presumption and the direction of interdisciplinary collaboration in each individual patient. As a result, my research work has been based on a correlation of imaging and morphological diagnosis.

#### **The research directions in which I was involved were:**

- A.** Correlations of imaging and anatomopathological diagnosis: macroscopic and cellular changes correlated with ultrasonographic aspects in various abdominal, cutaneous, cardiac, ocular or ENT disorders.

The involvement of ultrasound investigation in extremely diverse fields of medicine has given me the opportunity to work on various studies with teams of special-

ists in these fields. My collaboration was also complete because of the perspective on the aspects studied from an anatomopathological point of view.

**B. Complex morphological changes of organs and systems in the body in patients with diabetes mellitus and their ultrasound evaluation in the treatment of the underlying disease, associated disorders and complications.**

Since 1993, when I have been the head of the ultrasound teaching base at the National Institute of Diabetes, Nutrition and Metabolic Diseases “N. Paulescu”, I have had the opportunity to ultrasonographically examine patients with diabetes and related diseases and to be involved in teams that have conducted and published studies on extremely complex aspects of the diagnosis and treatment of this condition and its complications.

**C. Significant changes in the human body under the action of environmental factors and conclusions on possible measures to prevent diseases affecting urban and rural communities.**

In recent years, concerns about ways to improve the quality of life have led to studies on factors that frequently affect the health of communities. As seen through my participation in the coordination of research projects on the impact of environmental factors and mobility development actions on public health, I have also developed themes in this category in my publicity work.

**D. Ultrasound as a diagnostic tool in surgical and obstetric and gynaecological diseases with operative indication; macroscopic examination of operative specimens and interdisciplinary collaboration for evaluation and establishment of therapeutic attitude.**

My professional activity has been carried out for the last 25 years in a clinical hospital (Hospital “Dr.I.Cantacuzino”) with tradition in surgery and obstetrics-gynecology. During this long period I had the opportunity to collaborate with colleagues in the operating teams to elucidate diagnostic problems, performing pre- and post-operative ultrasound scans on hospitalized patients and even participating in the operation by ultrasound guidance of some maneuvers or intraoperative ultrasonog-

raphy. The results of this collaboration have sometimes also materialized through participation in studies carried out in surgical clinics and publication of the results obtained.

In this thesis I presented my scientific work, communicated through studies published in prestigious journals in Romania (Romanian Journal of Morphology and Embryology, Medical Ultrasonography, Farmacia, Acta Endocrinology, Revista de Cercetare si Interventie Sociala, Revista Medico-Chirurgicala a Societatii de Medici si Naturalisti din Iasi) and abroad (Ultraschall in der Medizin - European Journal of Ultrasound, Diabetes - Journal of American Diabetes Association, Experimental and Therapeutic Medicine). We have also presented a number of published books that have been the basis of teaching activity to students or postgraduate training of physicians in the field of ultrasonography (one of them received the “Gheorghe Badea” award of the Romanian Society of Ultrasonography in Medicine and Biology, and another was translated and published in Germany).

I have also been part of the research teams in some grants of the Medical Academy, led an educational project to implement the study of general ultrasonography in the undergraduate curriculum at the Faculty of Medicine (together with Fukuda Denshi Switzerland) and led research teams in some international projects. Some of the scientific articles I have authored or co-authored have been included in internal scientific projects (National Authority for Scientific Research in Romania PNCDI 2 program DIADIPOHEP 41-008/2007; Sectoral Operational Program for Human Resources Development - SOP HRD financed by the European Social Fund and the Romanian Government - contract no. POSDRU/159/1.5/S/137390, respectively contract no. POSDRU/187/1.5/S/155631).

I am a member of several national and international scientific societies: I am a founding member of SRUMB and I was vice-president from 2008-2016; I am a member of EFSUMB and WFUMB; I am a member of the Romanian Society of Normal and Pathological Morphology and a founding member of the Romanian Society of Thermography.

As regards academic achievements, I am a teacher at the University of Medicine and Pharmacy “Carol Davila” since 1991, being currently involved in both the activity of the undergraduate program in the discipline of pathological anatomy, and in the activity of the Postgraduate Department, where I coordinate the Training Center in ultrasonography of UMF “Carol Davila” and I have trained a number of over 1000 physicians, some of them teachers, to obtain the certificate of comple-

mentary studies in general ultrasonography.

As a recognition of the results obtained after the education of a large number of trainees in the postgraduate training program in general ultrasonography, the Ministry of Health appointed me by Order no. 418/2005 national coordinator of the certificate of complementary studies in general ultrasonography, and by Order no. 270/2014 I became national responsible for this certificate.

I have been chairman of the committee for more than 30 examination sessions for obtaining the certificate of complementary studies in the University Centre of Bucharest. I have also been a member of the exam commissions for the promotion of some teachers at the Discipline of Pathological Anatomy at UMF "Carol Davila" Bucharest, but also at other medical universities in the country. I have participated as a member of the committees for licensing exams.

### **The activity development plan includes:**

#### **1. Teaching activity**

Continuation of the activity of pathological anatomy course with students and of postgraduate training in the field of general ultrasonography with doctors enrolled in this program.

Supporting colleagues with a lower teaching grade in the fulfilment of educational tasks.

Organization of continuing medical education courses through the Ultrasonography Training Centre of UMF "Carol Davila".

Participation in committees for didactic promotion, doctorate, licentiate.

#### **2. Research activity**

Development of the activity of the Ultrasonography Training Centre of UMF "Carol Davila" by recruiting among the trainees or graduates of the course, some professionals with research performance.

Linking clinical activity with scientific activity and participation in interdisciplinary teams in the development of studies.

Continuation of participation with papers and presentations at national and international scientific events.

Publication of scientific articles in prestigious journals.

### 3. Professional activity

Performing ultrasound diagnosis in a correlative way, with the follow-up of cyto- and histopathological results in the examined patients, in order to obtain elements of ultrasound diagnosis directly usable in histopathological diagnosis.

Development within the “Dr. I. Cantacuzino” Clinical Hospital of the activity of interventional ultrasonography and ultrasonographic guidance of punctures and biopsies.

### 4. Organizational activity

As the national responsible of the general ultrasonography certification program, I want to initiate an activity of cataloging the physicians practicing in the field of ultrasonography, in collaboration with SRUMB and the Romanian College of Physicians.

I will contribute to the permanent updating of the general ultrasonography certificate examination topics and the training curriculum in this field.

I consider this plan of development of my activity as a continuation of the didactic, professional and scientific concerns of my entire career as a doctor and teacher of the University of Medicine and Pharmacy “Carol Davila” Bucharest.