

**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY**

**BUCHAREST**

**DOCTORAL SCHOOL**

**FIELD OF MEDICINE**

**CEREBROVASCULAR DISEASES FROM CLINICAL  
STUDIES TO CLINICAL PRACTICE**

**ABSTRACT OF THE ABILITATION THESIS**

**CANDIDATE:**

**ASSOCIATED PROFESSOR TIU CRISTINA**

**UMF „CAROL DAVILA,,**

**2021**

## **1. Scientific activity**

My main field of interest is related to cerebrovascular disorders, which I started exploring during my doctoral studies, whose subject was related to cerebral microangiopathies and their impact on chronic cerebral ischemic disease, thesis which I defended in 2000.

### **1.1 Research programs**

**1.1.1. VIASAN Program: Study of vasomotor reactivity in patients with ischemic cerebral disease.** (2001 / 1,300,000 ROL) This study was a **pioneer for the Romanian scientific research**, the theme being to establish a correlation between the Intima-Media thickness and cerebral vasomotor reactivity.

**1.1.2 CEEEX Program: Quantification of the effect of simvastatin on systemic inflammation, subclinical cardiac changes and early atherosclerosis in rheumatoid arthritis, CESIA** (Contract 114/2006, Value: RON 200,000). The project started from the idea that the link between the different arterial territories affected in patients with ischemic diseases (cerebral, coronary, peripheral) is the arterial endothelium and from the relationship between inflammation and atheromatosis, as well as between inflammation and endothelial injury.

### **1.1.3 Subtypes of stroke in metabolic syndrome. Master thesis for European Stroke Master**

Between 2008 and 2011 I attended the European Stroke Master's program organized by Danube University Krems, Austria, a program completed in 2012 by publicly defending my master's thesis entitled "Subtypes of stroke in metabolic syndrome".

### **1.2 Books and book chapters**

**1.2.1.** In 2006 I published as first author the book **Neurosonology**, published by the „Semne” publishing house , ISBN 973-624-375-3. The book presents the examination technique and diagnostic criteria for arterial stenosis, vasospasm or arteriovenous malformations for ultrasound examination.

**1.2.2 Neurological diseases in pregnancy.** C. Tiu, I. Mîndruță, O.Băjenaru in „Medical disorders in pregnancy”, Ana Maria Panaitescu, Gheorghe Peltecu, p 387-447, Romanian Academy Publishing House, Bucharest 2017, ISBN 978-973-27-2757-7.

**1.2.3 Current problems in the diagnosis and treatment of atheromatous stenoses,** C.Tiu in **News in internal medicine**, edited by Leonida Gherasim, Ioan Alexandru Oproiu, Medical Publishing House, 2017, pages 603-650, ISBN 978-973-39-0821-0

**1.2.4 Vascular cerebral strokes.** Authors: Răzvan Alexandru Radu, Cristina Tiu in **Medical emergencies** (edited by Maria Dorobanțu, Bucharest, Ed Medicală- ISBN: 973-39-0830-2.

**1.2.5 Thrombosis of the cerebral venes and venous sinuses.** Authors:Elena Terecoasă, Cristina Tiu - **Medical Emergencies** (edited by Maria Dorobanțu, Bucharest, Ed Medicală- ISBN: 973-39-0830-2

**1.2.6 "News in the management of acute ischemic stroke"** Authors: Silvia Nica, Elena Terecoasă, Cristina Tiu- **Current trends in life-threatening emergencies** (edited by Diana Carmen Preotu Cimpoșu) Gr.T.Popa Publishing House - ISBN 978-606-544-717-2.

**1.3 Reviews.** Over the years I have reviewed several articles for the following journals: Romanian Journal of Neurology, Maedica, Acta Endocrinologica, The International Journal of the Romanian Society for Endocrinology, Neurological Sciences, Stroke.

#### **1.4 Member of editorial teams and of committees for the organization of scientific events**

I am a member of the editorial board of the Romanian Journal of Neurology since the year of its establishment in 2000 and also annual member of the organizing committee of the Congress of the Romanian Neurological Society.

#### **1.5 Published articles. Elements for the recognition of scientific and research activity**

The activity carried out over the years has materialized in over two hundred works, of which I have chosen to present in this thesis those published in Web of Science, either as lead author (10) or as co-author with personalities of the international scientific community (10). H-INDEXTM 9. Number of citations: 1565.

## **2. Academic activity**

I started my teaching career in 1994. I promoted to the position of associated professor in 2007, position I still hold. Since 2020, I was appointed head of discipline at the SUUB Neurology Clinic. After obtaining the title of associated professor in 2007, each year, except for two sessions, I was part of all the examining boards for obtaining the specialist doctor title (two per year) and primary care neurologist title (one per year),

organized in the SUUB Neurology Clinic or in other university Clinics in Bucharest. I was the supervisor of the master's thesis entitled "**Determinant factors for not-providing IV tPA for acute ischemic stroke patients in a tertiary center from Romania**" by Dr. Elena Terecoasă, thesis which was defended on April 20, 2021 for completing the European Master's studies in Stroke, at the Danube University Krems, Austria and appreciated with **excellent** grade. I am a member of the *Faculty Council of UMF "Carol Davila"* since 2015 and a *member of the Department Council* since 2010, being elected by vote by teachers from the department and from UMF "Carol Davila" respectively.

### **3. Professional activity / Professional achievements**

#### **3.1 Professional career**

On February 5, 1991, I started my activity in the Neurology Clinic of the Bucharest University Emergency Hospital and I had the privilege of training as a doctor and teacher together with the late Professor Dr. Ovidiu Alexandru Băjenaru. Starting with 2004, I organized annually a post-university **training course in cervical&cerebral ultrasonography**, within UMF "Carol Davila", lasting three weeks, a course that is the only one of its kind in the country in the last ten years.

**3.2 Activity in specialized commissions of the Ministry of Health.** I am the president of the *AP AVC Working Group* (2015-2022). I coordinate the national network of stroke centers and I participated in the elaboration of legislative acts in this field. Since April 2021 I am part of the *Neurology Commission of the Ministry of Health*. At the level of the Bucharest University Emergency Hospital, I coordinate two national health programs: AP AVC, a program that aims for *the emergency treatment of patients with ischemic stroke* and the Program for the **treatment of patients with multiple sclerosis**.

**3.3. Recognition of professional activity. Activity in international specialized commissions** In 2021 I became **President of the Romanian Society of Neurology**. In 2019 I was elected as a **member of the Steering Committee** of the *Stroke Action Plan for Europe 2018-2030*. I am a *member of the ESO Presidential Awards Commission for the period 2020-2022*.

Since 2016, I am *member of the Steering Committee of the international project ANGELS*, an education project that provides logistical support for training neurologists, radiologists and emergency medicine specialists, as well as medical staff, and for

organizing hospitals and multidisciplinary teams able to provide interventional treatment for acute stroke. In June 2021 I was elected **a member of the Advisory Board** of the **European Master in Stroke**.

**Participation in examination commissions for the title of certified neurologist.** Over time, I was appointed as a member, and later as chairman of the commission for more than fifteen examinations for employment, within the University Emergency Hospital Bucharest as well as in other hospitals in Bucharest or in the country.

#### **4 . Plans for the evolution and development of the academic career**

My areas of expertise remain cerebral vascular pathology and inflammatory and demyelinating diseases of the central nervous system; but the expertise gained by the clinics' team in the field of epilepsy and movement disorders will continue to benefit from the organizational and logistical support needed for completing the research in course, and for obtaining new projects in these fields. Regarding my personal concerns for scientific research, my interest is now focused on the **study of biomarkers, both in the field of cerebral vascular pathology and in that of inflammatory and demyelinating diseases of the central nervous system**. I intend to establish an integrated center for clinical research in the field of multiple sclerosis. **Pharmacoclinical research** has been an important part of my previous work. The SUUB Neurology Clinic has the necessary expertise, the research team being evaluated several times by internal and international auditing and I intend to develop this field. Development of a current ultrasonography manual, which includes in addition to the basics of examination, updated information on diagnostic criteria, therapeutic methods and areas of application of the method is also an ongoing project.

In all countries that achieve remarkable results in the field of scientific research, two essential conditions are met: there are material resources and there is human resource. If I were to achieve one thing about development, it would be creating a more flexible framework for conducting research, which would allow not only attracting young people, but also keeping them, for time intervals that would be influenced by performance and the dynamics of the field and not by personnel regulations developed more than half a century ago.