

UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE

“CAROL DAVILA” BUCUREȘTI

ȘCOALA DOCTORALĂ

DOMENIUL DERMATOLOGIE

THE COMPLETE ”TAILOR MADE” APPROACH FOR

DERMATOLOGICAL PATIENT:

**ACCURATE DIAGNOSIS AND UPDATED TREATMENT, WITH
RESPECT TO MOLECULAR RESEARCH.**

ABSTRACT

CANDIDAT:

Simionescu Dana-Olga, Profesor Universitar; UMF ”Carol Davila” București

2021

Dermatology is a very complex Medical Specialty, as nearly 4000 diseases were described until nowadays. This means that the patient approach is challenging and should be permanently updated, in the light of new insights and molecular discoveries. Every few years new chapters are reclassified, new treatments are more and more available.

This Habilitation Thesis is a display of my career until October 2021, over the last 22 years, following Ph.D. completion (between 1999 and 2021). It encompasses my studies, teaching abilities, team leadership and subsequently exposes an overview of a clinical, cellular, and molecular approach to the patient, eventually leading to contribution in moving forward the dermoscopic field, DIF diagnosis, and reverberating the distinct face of new cells: telocytes.

The legal requirements of the Habilitation process were fulfilled while building this work. I have to emphasize that I have already accomplished Doctoral Theses as a Coordinator, based on the Habilitation Certificate, released in 2011.

This Habilitation Thesis has three sections and twelve Chapters, as presented below.

The first SECTION deals with scientific activities in the field of Dermato-Venereology, including insights of my Ph.D. thesis: "Sun-damaged human skin,.. The Ph.D. thesis investigated keratinocytes and melanocytes' death by necrosis and apoptosis, epidermic cancers, and UV radiations leading to skin malignancies.

The dermoscopy sections displayed mucosal pattern area, a field where I am an international expert, as I have published important papers in high-ranked ISI Thomson Journals (e.g. 11, as Journal of American Academy of Dermatology, 6, as Journal of the European Academy of Dermatology and Venereology, and 6, as Journal of Cellular and Molecular Biology, respectively). My adherence to the international team of IDS allowed me to publish also in the International Atlas of Dermoscopy, under the heading of Marghoob AA (New York). I made an accurate oral and genital mapping for mucosal areas, starting with the characteristics of involved cells. Other papers in dermoscopy were focused on recurrent melanocytic lesions, nodular melanoma, and collision skin tumors.

One of my particular areas of expertise involves melanoma and carcinoma, malignant tumors that arise within the epidermis. The paper "Errors in melanoma approach" emphasized the necessity of MDs coming from countries where the lack of updated algorithms led to important errors in the diagnosis and management of melanoma patients, to adhere to the International Melanoma Guidelines. Rare cases of melanoma patients and challenging localizations were published, invariably with the support of a highly qualified team of pathologists.

In the field of risk factors for skin cancer, we presented in 2018 the iris signal as a strong indicator for the population in South-Eastern Europe. The results of this study indicated that a blue periphery with light brown collaret and freckles iris pattern is a reliable phenotypic marker for epidermal skin cancer.

The cutaneous telocytes are interstitial cells found within the dermis, that recapitulate all the previously documented features in the interstitium of other organs. The paper from 2012 is the first paper on skin telocytes worldwide, and it was followed by the dynamic of telocytes into the psoriatic lesions and new techniques (FIB-SEM) displaying their extracellular vesicles. This Habilitation Thesis is dedicated to Laurentiu M. Popescu, "the father of telocytes", who was my mentor, in medicine and life.

As regarding the keratinocytes, I dedicated some papers to apoptosis in carcinomas and seborrheic keratoses, and its connection with dermoscopic patterns.

Chapter 2f is dedicated to psoriasis, a vast chapter of our Specialty, in which I studied a novel treatment (CF101) into an important clinical trial and published a state-of-the-art in biological therapies in psoriasis.

During my career as a Professor of Medicine, I published "Atlas of Dermatology", "Dictionary of Dermatology", "Atlas of Immunology" and wrote some chapters in novel textbooks of surgery and dermoscopy, both in Romania and abroad.

This Habilitation Thesis makes an extensive analysis of my Research Programs in Chapter 3. The fourth chapter deals with the scientific and research projects and activities, my reviewer activity for International Journals, and authorship for textbook chapters.

The second SECTION consists of four main topics: my academic degree evolution, starting from demonstrator (Ph.D. student) to Clinical Professor and Head of the Clinical Department of Dermatology; Didactic products, books, dictionaries which were made and/ or coordinated under my supervision; coordinating Bachelor Degree Theses of the graduating Students; supervising Admission/ Bachelor/ Medical Upgrade Exams.

The third SECTION displays my skills as a clinical MD and Academic Professor, in terms of teaching and tutoring.

The fourth SECTION is about future projects: I trust in the consolidation of our research team, by coordinating young fellows in our Department of Dermatology. I intend to expand the research field, e.g. by comparing the iris signal of visceral malignancies to skin cancer. The study of the so-called *neuroimmune skin axis* can be a major interest area. And it would be great to build up a book with cases in a multidisciplinary approach, containing dermato-rheumatology clinical cases. I will keep myself updated and I will dedicate all my knowledge to the coordination of Ph.D. Theses for Ph.D. Students.

In conclusion, although I have coordinated Doctoral Theses over the last 10 years, I decided to line up for the new requirements and I worked with passion and joy regarding this Habilitation Thesis.