

ABSTRACT

of the habilitation thesis: *“Pathophysiological consequences of the exposure to the occupational risk factors”* written by Assoc. Prof. Dr. Marina Ruxandra Oțelea

The habilitation thesis *“Pathophysiological consequences of the exposure to the occupational risk factors”* presents my professional, scientific and academic activity during the last 22 years, after the completion of my PhD studies. The thesis illustrates my achievements towards a better understanding of the etiopathogenic mechanisms of the occupational diseases and of the work-related diseases, a category of disorders located at the border line with other medical specialties.

The thesis is structured in three main sections, in respect to the criteria recommended and approved by CNATDCU.

SECTION I refers to the *“Scientific and professional achievements”* and contains the main results of my professional, research and academic activity.

Chapter 1. Professional development includes a short presentation of the professional evolution from the graduation of the Faculty of General Medicine of the “Carol Davila” University of Medicine and Pharmacy, Bucharest, in 1985, the professional carrier, the medical fellowships in country and abroad, the training modules and competency certifications obtained.

Chapter 2. This chapter refers to the main *professional achievements*, from the residency training, to obtaining the specialization and afterwards, up to now. The main achievements that led to the recognition of my activity are presented. They point out to the national coordination of 2 international research projects, to the invitation as speaker and to the merit diplomas offered by several medical societies, to becoming a member of the board of the Romanian Society of Occupational Medicine, secretary of the Commission of Occupational Medicine of the Ministry of Health and of the Occupational Medicine Commission of the National College of Physicians in Romania. The editorial activity (as managing editor of the Romanian Journal of Occupational Medicine), the reviewer activity for Romanian and international journals, including ISI journals, and the initiatives and coordination of several medical conferences and congresses are briefly mentioned.

Chapter 3 includes the presentation of the *academic progresses* from assistant lecturer to associate professor. This professional route gave me the opportunity to

coordinate several license thesis and the possibility to involve in my research activities students, medical residents and PhD students. The results of these studies were published in peer reviewed journals and/or communicated in national or international congresses and conferences. I was the editor of 5 monographies, I wrote 12 chapters (as unique or co-author) in books selected by national publishing houses listed by CNCSIS and 3 chapters published by international publishers.

Chapter 4 describes *my scientific and research activity*. After a brief description of my doctoral studies (subchapter 4.1.), the chapter presents the main domains of research after graduating my PhD. (subchapter 4.2.) I was involved in. Considering the specificities of my speciality, the identification of the effects of the occupational risk factors on humans and of the pathophysiological consequences generated by the exposure to these risk factors are the main research topics. In this context, physiology and pathophysiology were always in the center of my activity.

I have classified the directions of the postdoctoral research in 5 subchapters that concern the occupational risk factors and the pathophysiological consequences in pulmonary, cardio-metabolic, neurological, dermatological and oncological occupational diseases. For each of these subchapters I explained the relevance of the studies in the international scientific context, described the most significant international and national projects in which I have participated, and the results of these projects. For each domain, the specific results are exemplified with the most important personal contributions.

The results of the *6 international projects* and of *over 10 national studies* in which I was or I am currently involved were published in national and international medical journals. I am the author of *38 publications listed in Web of science* (core collection) and I have a *Hirsch index of 8* (ISI web of science, core collection, Thompson Reuters). These articles reached *356 citations in Web of Science and 373 citations in Scopus database*.

SECTION II presents the strategy, directions and priorities of the *development of the professional, scientific and academical carrier* and the possibilities to achieve these plans.

The main research objectives are: a) Creation of research team for *the study of the metabolic syndrome related to night shift work* and b) *participation to international projects* related to the interaction between occupational risk factors and the characteristics of the exposed subjects.

I am a member of the Romanian team that recently won the European project „*Connecting European Cohorts to Increase Common and Effective Response to SARS COV 2 pandemic*” (ORCHESTRA) and I intend to involve young researchers in this project. I was one of the initiators of a national project related to the current pandemic, that was approved by the Ethical Committee of the University of Medicine and Pharmacy Carol Davila concerning the modifications in occupational activities and their consequences for the workers.

By now, I have included occupational medicine residents in research activities and I have coordinated 3 projects of the Scientific Organization of Medical Students (SSM) of Bucharest. I have also participated to the result analysis and publications of two doctoral students (one from the doctoral school of the University of Medicine and Pharmacy Carol Davila and one from the doctoral school of the University „Ovidius”) and I intend to enlarge these activities, by integrating PhD students in my research projects. I have also facilitated a scholarship for a PhD student in Norway funded from the COST Action 16216 (OMEGA-NET), a project I am currently coordinating at national level.

SECTION III, “*References*”, contains 99 titles that support the truthfulness of the data presented in the habilitation thesis.