



„OVIDIUS” UNIVERSITY OF CONSTANTA

DOCTORAL SCHOOL

HABILITATION THESIS

DYNAMICS OF CURRENT INFECTIOUS PATHOLOGY

ABSTRACT

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2024

The summary of the habilitation thesis

This habilitation thesis presents the results of my training activity in the scientific, medical, managerial and most important from my point of view, the academic level, over a period of twenty years, so after the defense of the doctorate.

The habilitation thesis was drafted in compliance with the provisions of the Order of the Ministry of Education and Scientific Research no. 3121/21.01.2015, as well as in compliance with the Regulation of the University „Ovidius” of Constanta no. 141/16.05.2016, regarding the organization and conduct of the process of obtaining the certificate of empowerment and its content is made according to the recommendations of the CNATDCU and the legislation in force.

The long period of analysis and the complexity of the results represent a real challenge, but unfortunately, time acts against us, through the omissions that occur and the fact that the older results, the, innovative at the time, they are currently losing out of date.

The first chapter of the thesis, the introductory one, is dedicated to a general presentation of the evolution of my scientific research career in close connection with the medical, didactic and managerial one, emphasizing the notable quantifiable results of the university career: research projects earned, articles indexed under the Clarivate Web of Science-Core Collection or other internationally recognized databases, and, participation in national or international conferences, lecturer at various scientific events, research project proposals, participation in project teams as a member of other research projects, international recognition, etc, participation in scientific committees and committees for organizing scientific events, as well as in the commissions of specialized competitions.

The habilitation thesis aims to develop my career in the medical field, within major research areas, forming a solid foundation for future achievements and developments. The approach of infectious diseases following the dynamics of the current infectious pathology represents a new perspective, complex and different from the usual one, constituting the red thread of this work, emphasizing the influence on which new factors, different from the classical ones influences the course of infectious diseases. Intense population circulation between different geographical areas, recent climate change due to global warming are examples of phenomena that also affect the presence of vectors in the area, thus intervening in the transmission of pathogens, taking into account in each case, apart from the classical factors that influence the evolution of infectious diseases, described in the literature, factors that take into account, in particular, the microbiome and its own macrobiome, the receptivity of the organism, in close relation to the degree of competence of the immune system, for each individual. Individual immunity, innate or acquired through infection or vaccination, is what defines our response and disease progression.

Individual immunity, innate or acquired through infection or vaccination, is what defines our response and disease progression. This individual immunity is, in turn, influenced by various factors (environmental factors, other related conditions or treatments, age, pregnancy, etc.). Because of this, each infectious disease can manifest and evolve differently from one patient to another, sometimes deviating from the usual classic patterns cited in specialized literature.

These particular aspects, the distribution of infectious diseases according to environmental factors, their different evolution according to the level of competence of the immune system and even under the same treatment instituted, I presented them in this thesis, in a selection of scientific papers on which I wrote following the clinical studies carried out.

The topic chosen for this habilitation thesis, **Dynamics of current infectious pathology**, involves the approach of infectious diseases from another perspective, complex and multidisciplinary, an innovative way of reasoning, a *reinterpretation* of the etiopathogeny of these diseases, in close interconnection with globalization, social dynamics, and, the impact that climate change and environmental factors have on the spread of pathogens that can cause epidemics or even pandemics at some point, which can influence the emergence or re-emergence of zoonotic diseases, depending on the individual receptivity of the organism, which is *the key* to the whole mechanism of evolution, an infection at the level of each individual.

From the perspective of the approach set out in the previous paragraph, which is the foundation of this habilitation thesis entitled Dynamics of current infectious pathology, among the scientific papers that have been published in various specialized journals or in the volumes of scientific manifestations indexed ISI or BDI, after the doctoral degree, numbering 36, of which 20 as lead author, I will briefly present the most representative ones, which also contain my most important concerns in the wide range of infectious diseases, tracing, and, so are the future lines of research development.

Out of the 36 papers I published in specialized journals, 23 are indexed in the Clarivate-Web of Science Core Collection database, 20 As the lead author (14 indexed Web of Science) and 16 as the co-author (9 indexed Web of Science), to which are added 20 abstracts published in magazines or in the volumes of scientific events in the country or abroad. Of the 33 papers I presented at national and international congresses after my doctorate, I selected 10 representative works for the particular aspects mentioned above.

The Romanian academic environment, strongly defined, with old traditions, has educated the deep respect for the didactic act and in general the respect for the research work, the quality of publications and not least the social relations with the scientific community. The study of infectious diseases has given consistency to university concerns and has permanently provided the framework for the progress of professional development.

Contact with the domestic and international scientific world has also enriched the sphere of understanding and perception.

In the second part of the thesis is presented the plan of evolution and development of their own professional, scientific and academic career, respectively the research directions deepened throughout this period, directions that will be the basis of future doctoral theses.

Thus, from the vast infectious pathology we have selected the following research topics:

1. Meningitis, regardless of etiology.
2. Infections in immunocompromised patients (congenital or acquired immunodepression, through HIV or other immunocompromised diseases).

3. Emerging infections, studying their distribution, diagnostic methods and evolution under treatment.

The third part contains the bibliographic references corresponding to the first two chapters.

This candidacy is the result of years of quantitative accumulation in the work carried out and aims to achieve a qualitative leap. I personally regard this stage of professional development as a great honor, but at the same time a new challenge, with very high responsibilities, in the general context of respect for involvement, as representing a great honor, at this high level of scientific, medical and didactic research activity.