ABSTRACT

Professional activity developed after awarding of title Doctor in Veterinary Medicine is presented in three chapters.

The first chapter includes the general presentation of teaching activity, as well as research and coordination activities up-to-date. Teaching activity was accomplished inside of Bachelor cycle for Veterinary Medicine and Control and Expertise of Foodstuff, in Master cycle – Veterinary Medicine and Postgraduate School of Veterinary Medicine. Post-doctorate research activity is proved by 14 national projects and 1 international project, three of them as project responsible.

The results of financed and non-financed research were valued as publication of more than 100 papers and participations of many national and international symposiums and congresses. Published papers are cited in important data bases: 31 citations and h index 4.00 (Google scholar) and 27 citations and h index 3.00 (Web of Science Thomson-Reuters).

The second chapter presents research which use computerized morphometry as assessment method. This method is one of the research methods used in pathology, in order to evaluate objectively the changes that appear in tissues and organs once a pathological process occurs. The usefulness of this method is proved mainly when lesions are evaluated by the pathologist in a subjective manner, characteristics such as how big is a process or what differences are between stages of a certain process being not possible to establish.

This method have been used in order to evaluate processes such as benign tumors and their spontaneous regression objectively (canine cutaneous histiocytoma), in malignant tumors for proving the differences between grades of malignancy (canine mast cell tumor) and for evaluation of degenerative vascular processes in experimental models of diabetes mellitus. Nuclear area, cellular area, vascular diameter, and cell

density have been assessed. Statistics differences have been evaluated using student t test and ANOVA.

Computerized morphometry proved to be a valuable tool in objective assessment of the aforementioned pathological processes, both in research and diagnostic activity. The process of spontaneous tumoral regression has been proved in canine cutaneous histiocytoma. The cases diagnosed with canine mast cell tumor presented significant differences between different grades of malignancy. Hypertrophy of arteriolar media is the pathological feature of diabetes mellitus microangiopathy in rat experimental model.

Chapter 3 includes other financed or non-financed research fields where important results have been obtained and published. This is subdivided in three subchapters. The first subchapter presents the results obtained in order to develop the methods of education in veterinary medicine. The major objective of this project was to create a platform for communication and information for students, veterinarians and veterinary medicine educationalists using web 2.0 instruments. The second subchapter gathers the results obtained during necropsy of wild animals. Classification and presentation of cases is based on the concept of "syndromic surveillance". Thus, several lesional profiles have been diagnosed, such as respiratory syndrome in alligator and penguin, multifactorial syndrome in elephant and tiger, traumatic syndrome in deer an enteritis-diarrhea syndrome in non-venomous snakes. The third subchapter presents reactivity of gall bladder lymphoid associated tissue in chicken. Identification and evaluation of reactivity of lymphoid tissue is considered in vaccinated chickens, as well as in spontaneous aviary infections, such as *Escherichia coli* (acute and chronic type), avian infectious bursitis virus and Marek disease virus.