

REVIEW

Subject: Application for the academic position "Professor"

in the professional field "Medicine and Scientific Specialty "Anatomy, Histology and Embryology of Human", announced at St. Kliment Ohridski University in the State Paper issue 48/28.06.2022

by Prof. Hristo Nikolov Chuchkov, Ph.D., M.D., Lecturer in the Department of Anatomy, Pathology and Forensic Medicine of the Medical Faculty of Sofia University "St. Kliment Ohridski" – Sofia.

The only candidate for the announced contest Associate Professor Ivan Ilkov Maslarski was born on 3.3.1980 in Sofia city. He graduated with a Master's degree in Biology and Chemistry in 2002. at Sofia University "Kliment Ohridski". During his studies, he was in a study group of anatomy, taking part in research related to anthropology and specifically to dermatoglyphy. This enabled him to defend a thesis informed by his dermatoglyphic knowledge with an accompanying Master's degree, which was followed by the defense of a second Master's degree in Chemistry. In 2006 he successfully defended his dissertation on an interdisciplinary topic related to the prevention of psychoactive addictions. In 2007 he applied for a full-time assistant in the newly formed Department of Anatomy at the Faculty of Medicine, and at the competition, chaired by me, showed excellent knowledge of anatomy and histology, which greatly exceeded the knowledge of a biologist and surprised me in a positive direction.

In the period following his appointment he was promoted successively to senior, senior assistant professor, and based on a three-year specialization and the acquisition of a specialty in 2014 in anatomy, cytology, and histology, he was also elected associate professor in 2016. Since 2018, he has been appointed Head of the Department of Anatomy, Histology, and Embryology.

Socially, Associate Professor Maslarski is a family man and father of two girls and one boy.

Professionally, Associate Professor Maslarski has shown significant quantitative, and excellent, highly rated by qualitative indicators activity, specified in the management of the lecture course in cytology and anatomy of medical and nursing students, the preparation of curricula, and the preparation

of teaching materials. Suffice it to point out that in the last five years Maslarski has conducted a total of 6502 hours of teaching, of which 5460 hours have been completed in lecture engagement. This exceeds the mandatory standards by a considerable margin at the norm of 360 hours. He also teaches anatomy, physiology, and hygiene to students of the Faculty of Education of Sofia University.

Regarding administrative duties, Maslarski has been active in the procurement of dry and wet specimens, preparation of syllabi, allocation of teaching load of the faculty, organization of colloquia, practical examinations, and solutions of problems related to training of students in various disciplines in the department. Of no less importance and contribution is the achievement of the digitization of teaching materials and the implementation of an online teaching method that has been published in an international journal.

Associate Professor Maslarski has been active in building relationships with other departments, as is the case with the neurosurgery department of Tokuda Hospital for the implementation of joint dissections between neurosurgeons and anatomists on a project related to 3D training. Thanks to this, three-dimensional images have been created and virtual reality models of different sections of the human body have been built.

Internationally, as early as 2012 Maslarski took part in the development of a scientific project with scientists from the University of Cologne – Germany, and maintained the relationship between the two departments.

In the scientific research area, Associate Professor Maslarski possesses scientific metrics that are in accordance with the regulatory requirements, criteria, and evaluation indicators for applying for the title "Professor". He has authored and co-authored 54 scientific papers, most of which he is the first author. Two of the works are textbooks, the other two are monographs, and the rest are papers and posters. Twenty-two publications were submitted to the competition, one monograph, one textbook, and eleven papers from participation in plenary sessions, papers, and posters.

The candidate's scientific contributions are in several areas.

In the first place, I place his contributions with the study of twin relationships, where a monographic work, *The Twin Method in Medical Research*, was formed. Maslarski proposes a biometric model for determining zygosity that can be used to determine twin type in combination with blood

group studies. The profiles of monozygotic and dizygotic twins were determined by dermatoglyphic and biometric parameters. The importance of certain genetic and epigenetic factors influencing the epidemiology of several diseases is highlighted.

Maslarski offers an experimental and sparing method of neurological importance in the dissecting of the suboccipital region.

Of great interest are the virtual models created by the candidate regarding the fluid 3A model of the heart and the aortic arch in the presence of the aneurysm, as well as a model of the variations of the main veins of the iliac veins in venous stasis.

Contributions to anatomy are described as anatomical variations, such as those of the axillary plexus, but associated with pathological changes in this area. Similar contributions are studies of variations in the course of the axillary artery, obturator artery, hepatic artery, and arteries along the palm. These studies have undeniable practical relevance for vascular surgery.

The candidate's practical scientific orientation, which is rare among most anatomists, is found in most of the candidate's research and highlights his remarkable contributions to medical science.

One of the contemporary and very important contributions is related to the widespread malignant breast tumor mainly among women. Together with colleagues from the city of Varna based on dermatoglyphic and etiological studies Maslarski found statistically significant differences between women with cancer and healthy women in terms of the mean values of the papillary images of the five homogenous digits and total digital ridge number. He proposes an original dermatoglyphic algorithm that is applied in oncological practice in our country. His studies establishing the relationship between genetic and environmental factors, which have prognostic significance for the establishment of the malignant process, have a similar significance.

In an anatomical aspect, the author traces, and studies in depth the emissary openings in the cranial bones, establishing the relationship between them and intracranial pressure, especially in pathological processes, which is of value in the application of surgical interventions.

As interesting contribution relates to the coccygeal glomus and the sensory receptors associated with it, Maslarski makes suggestion for the origin of the glomus cells from the neural crest and precursors of the Schwann' cells.

Of educational nature are the author's contributions related to the teaching of neuroanatomy, such as the interest in video recordings, which the author finds to have an organizational potential to the learning process.

In conclusion, I consider that the candidate for Professor, Associate Professor Ivan Maslarski is an established experienced lecturer with good communication and leadership skills who has contributed to the development of the Department in improving the necessary resources for quality teaching.

The above-mentioned main contributions of the candidate and the fully sufficient scientometric data are remarkably positive and reveal the high morphological knowledge of the candidate. The contributions described are distinctive in their diversity and entice scientific curiosity for future research. All this in summary gives me sufficient grounds to propose to the scientific jury to give a positive assessment of the award of the title of Professor to Associate Professor Ivan Ilkov Maslarski.

25 September 2022

Sofia

Signature of a member of the jury Prof.Dr. Hristo Chuchkov