

REVIEW

of the dissertation for awarding the educational and scientific degree **“Doctor”** of **Dr. Vladina Miroslavova Dimitrova-Kirilova**, full-time doctoral student, by MU-Varna Rector’s Order № P-109-60/01.02.2019 in field of higher education 7. Healthcare and Sport, professional direction 7.1. Medicine, scientific specialty "Occupational diseases", on the topic **“Occupational predisposition in asymptomatic strokes”** with scientific supervisor **Prof. Veselinka Dimitrova Nestorova, MD.**

Reviewer:

Prof. Silva Peteva Andonova – Atanasova, MD, DSc
Chair and member of the Academic jury,
Executive director of University Hospital St. Marina – Varna,
Head of Department of Neurology and Neuroscience, Faculty of Medicine,
Medical University “Prof. Paraskev Stoyanov” – Varna

This review was prepared in accordance with MU-Varna Rector’s Order № P-109-37/25.01.2023 and it is compliant with all requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for the Application of the ADASRB and the Regulations for the Development of the Academic Staff at MU-Varna.

Dr. Dimitrova has presented all necessary documents as required by the RDAS at MU-Varna.

Brief biography:

Dr. Vladina Miroslavova Dimitrova-Kirilova was born in 1988 in Dobrich where she completed her secondary education in 2007. In 2013 she graduated cum laude the “Medicine” MA programme at MU-Varna. In 2021 she earned a specialty in “Neurology”. Dr. Dimitrova started her career in October 2013 as a physician at CEMS-Varna, Dolni Chiflik branch, where she worked until May 2015. In June 2015 she began her post-graduate studies at Second Neurology Clinic at University Hospital St. Marina – Varna. In 2017, she won a competition for associate professor at Training sector of Occupational Diseases, beginning her academic career, and in 2018, began her full-time doctoral studies in “Occupational diseases” at Training sector of Occupational Diseases, Department of Optometry and Occupational Diseases, MU-Varna, in the 7.1. Medicine professional field.

Dr. Vladina Dimitrova teaches “Occupational diseases” to Bulgarian- and English-speaking medical students at MU-Varna, as well as “Neurological diseases” to students studying Kinesiotherapy and Speech Therapy.

She has participated in a number of thematic qualification post-graduate courses: Regulation on the education of doctoral students; Methodology of scientific research; Research ethics; Statistical methods for data processing and presentation; Communication techniques and presentation skills among others.

Her main professional and academic interests are in the fields of cerebrovascular disease, deep brain stimulation in neurodegenerative diseases of the nervous system and occupational neurological injuries. She has theoretical and practical knowledge in the fields of neurology and occupational diseases, which she employs in her practice and teaching. She has good teamwork, communication and organisation skills.

Dr. Vladina Dimitrova-Kirilova is fluent in written and spoken English.

She is a member of the Bulgarian medical association, the Bulgarian Society of Neurology and the European Stroke Organisation.

Dr. Dimitrova ended her postgraduate studies as per MU-Varna Rector's Order № P-109-37/25.01.2023, as recommended in report protocol № 102-123/16.01.2023 by prof. Zornitsa Ivanova Zlatarova-Angelova, MD, PhD – head of the Department of Optometry and Occupational Diseases, with Faculty Council decision № 199/18.01.2023 and report protocol № 104-49/19.01.2023 by Prof. Antoniya Slavcheva Dimova-Yordanova, PhD – dean of the Faculty of Public Health at the Medical University “Prof. Paraskev Stoyanov” – Varna.

Dr. Vladina Dimitrova's dissertation is devoted to quite a relevant topic. Stroke is the second leading cause of death and permanent disability globally, with 12.2 million cases registered in 2019. In recent decades, the frequency of stroke occurring has increased by about 70% globally, the spread – by about 85%, and the mortality rate – by 43%. Considering the more increased frequency of occurrence of asymptomatic, “silent” cerebrovascular disease versus the frequency of stroke occurrence, it certainly is a significant threat to public health. It is held that for every symptomatic case of stroke, there are about 10 asymptomatic cases. Occupational factors are also significant for their continual effect and high intensity. This is why studying their harmful impact, including their role in the development of asymptomatic stroke is so important and relevant.

The purpose and problems of the thesis are clearly phrased and based on detailed literary review on numerous publications on the topic. There is a detailed discussion of the risk factors for asymptomatic ischemic cerebrovascular disorders of cerebral circulation. The important points of the historic development of occupational diseases has been organised well. The postgraduate has summarised data on the effect of modifiable and non-modifiable risk factors for asymptomatic disorders. She has done an in-depth analysis of the data on the effects of occupational factors such as stress,

physical workload, long working hours, working posture and others on asymptomatic stroke morbidity. She has researched scientific reports on the effect of work factors on the modifiable risk factors for cerebrovascular disease.

The object of study are 151 patients divided into two groups. The first group consists of 41 patients with vascular risk factors and no history or clinical data of stroke or TIA, with changes on MRI – hyperintense white matter lesions with probable vascular aetiology, lacunar strokes, cerebral microhaemorrhages and brain atrophy. The second group consists of 110 patients with vascular risk factors and no history or clinical data of stroke or TIA, without changes on MRI. The participants were examined, their risk factors were established, their detailed medical history was taken. Laboratory and neuroimaging tests were run for the purposes of the study. Assessment scales were used to assess depression severity.

The thesis is well-structured. It is comprised of 122 pages and contains 21 figures and 17 tables. The bibliography sources 507 works, 10 of which are in Cyrillic and 497 Latin script, with 60% of the citations being from sources published within the last 10 years.

Dr. Dimitrova's dissertation stands out with its detailed analyses of study results and clear formulation of the conclusions stemming from them. The correlation established between longer professional experience, a longer work week, working outside and changes in MRI is a key finding.

The dissertation presents the following original contributions of the author:

1. The first ever study, at home, of the role of occupational risk factors in the development of asymptomatic ischemic cerebrovascular disorders in working age patients;
2. The relation between levels of occupational stress and asymptomatic cerebrovascular disease.

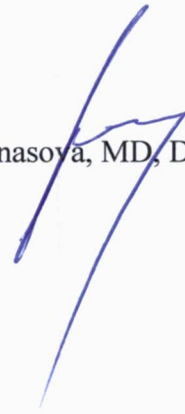
Conclusion

Dr. Vladina Miroslavova Dimitrova-Kirilova's dissertation is compliant with all requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria and Regulations at MU-Varna for awarding the educational and scientific degree "Doctor" of Medicine.

I recommend to the honourable Academic jury that they vote in favour of awarding the educational and scientific degree "**Doctor**" of Medicine in field of higher education 7. Healthcare and Sport, professional direction 7.1. Medicine, **scientific specialty "Occupational diseases"** to Dr. Vladina Miroslavova Dimitrova-Kirilova.

Varna
07.03.2023

Reviewer:
(Prof. Silva Peteva Andonova – Atanasova, MD, DSc)

A handwritten signature in blue ink, consisting of several fluid, overlapping strokes that form a stylized, abstract shape.

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