

To The Chairman of Scientific Jury
designated by Order No. R-109-239 / July 26, 2019
by the Rector of the Medical University-Varna

Statement

by Prof. Fedya Nikolov, MD, PhD
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Department of Cardiology, Medical University-Plovdiv,
Memeber of the Scientific Jury designated by Order
No. R-109-239 / July 26, 2019 by Prof. Krasimir Ivanov, MD, PhD, DSc
Rector of the Medical University-Varna

In reference to: Competition for the occupation of the academic position Associate Professor in the field of higher education Health and Sports, in the professional field Medicine and scientific specialty "Cardiology" for the needs of the Department of Propaedeutics of Internal Medicine, Faculty of Medicine at the Medical University of Varna and for the Clinic of Internal Medicine at the University Hospital "St. Marina "- Varna. The competition was announced in the State Gazette no. 43 / 31.05.2019.

By order No. R-109-239/26.07.2019 of the Rector of the Medical University-Varna I was appointed as a member of the scientific jury and by N: P-109-348/14.08.2019 to prepare an opinion for the competition for the occupation of the academic position Associate Professor in the field of higher education Health and Sports, in the professional field Medicine and scientific specialty "Cardiology" for the needs of the Department of Propaedeutics of Internal Diseases, Faculty of Medicine at the Medical University of Varna and for the Clinic of Internal Medicine at the University Hospital "St. Marina "- Varna.

The procedure for announcing the competition is in accordance with the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria and with the Rules for the Development of the Academic Staff in the Medical University-Varna. Dr. Maria Stoyanova Dimova-Mileva is the only candidate for the position.

1. Short biographical data

Dr. Maria Dimova graduated Language High School “P. K. Yavorov “- Silistra, with English and French languages in 1995 and Medical University Varna in 2001.

She started working as a resident in Internal Medicine Department at the Hospital in Silistra, then worked as a medical representative; during the period 2004-2005 she worked at the Cardiology Clinic at the University Hospital "St. Marina "; since 2008 she has been working in Clinic of Internal Medicine University Hospital “St. Marina ”. Since 2011 she has been an assistant at the Department of Internal Medicine at the Medical University of Varna.

Dr. Maria Dimova-Mileva has acquired specialties in Internal Medicine - 2014 and Cardiology – 2018.

Postgraduate qualifications

1. Abdominal Echoscopy
2. Expert activities in Echocardiography
3. Ultrasound diagnostics of vessels
4. Certificate of Transthoracic Echocardiography in Adults of the European Association of Cardiovascular Imaging (ESC/EACVI)

In terms of professional qualification, she fulfills the requirements for habilitation.

2. Scientific research works.

Dr. Maria Dimova received PhD in 2017 of the thesis “Prospective Follow-up Of Patients With Beta-Thalassemia Major For Cardio-vascular Status And Cardio-vascular Pathology”

For this competition, Dr. Maria Dimova has presented the following scientific papers:

1. Monograph: Maria Dimova. Anemia and cardiovascular changes; ISBN 978-619-221-202-5. 224 p.

2. Full-text publications in referenced and indexed in a worldwide database of scientific information scientific journals-3
3. Full-text publications in peer-reviewed scientific journals – 22
4. Full-text publications in a book-1
5. Abstracts in referenced and indexed in a worldwide database of scientific information scientific journals-5
6. Abstracts of reports non-refereed peer-review journals and editing of collective volumes -11
7. Articles in non-refereed journals with scientific review beyond the required minimum state requirements – 3
8. Participation in international, national and regional scientific events - 6; participation in student forums as a leader of young researchers - 10.

Citation: There are 10 citations of the scientific works of Dr. Maria Dimova in scientific publications with scientific review.

3. Scientific areas in which the main scientific publications are:

- cardiovascular disorders and evaluation of cardiac function in patients with Thalassemia major
- renal changes in patients with Thalassemia major
- anemia and cardiovascular changes
- heart failure and biomarkers
- cardiovascular involvement in diabetes mellitus and thyroid pathology
- chronic kidney disease
- cardio-oncology

4. Scientific and applied contributions

Dr. Dimova's main scientific interest is concentrated in the onset of cardiovascular changes in patients with anemia and in particular in patients with congenital hemolytic anemia such as thalassemia major.

Dr. Dimova is part of the team of the Hemophilia and Rare Anemia Center at St. Marina Hospital in Varna and is directly involved in the monitoring of rare anemia patients. She has published her observations and research on cardiac counseling in several articles on cardiovascular pathology in patients with thalassemia major. Anthropometric and hemodynamic parameters of 38 patients with Thalassemia major and age and gender matched controls were investigated, taking into account significant differences in the Bulgarian thalassemic patient population compared to controls. Echocardiography examines standard echocardiographic indices of these patients but the new deformation techniques are also used. Despite the normal left ventricular ejection fraction, increased left ventricular muscle mass is found in patients with thalassemia major, increased left ventricular volume indexes, decreased myocardial velocities, and lower strain and strain rate values compared to controls. Changes in the left atrium were also observed - a larger indexed volume and a reduced left atrial emptying fraction. The value of NTproBNP, as a biomarker for heart failure, was also investigated and it has been found that, in those with increased left atrial volume, it is significantly greater than patients with normal natriuretic peptide values. Such a study in thalassemia major populations has not been conducted not only in Bulgaria but also in other countries.

In another article, the diagnostic and therapeutic behavior of thalassemia due to heart failure is discussed. The recommendations for intensive treatment for acute deterioration of cardiac function are presented and guidelines for the use of chelating agents.

Rhythm disorders in patients with thalassemia are one of the major cardiovascular changes. This issue is discussed in a separate article, discussing the mechanisms of occurrence of conductive and rhythmic disturbances. Also discussed are drug and non-drug treatment, the need for anticoagulant therapy.

Renal disorders in thalassemics have been poorly studied not only in our country but also in the world. A paper in which Dr. Dimova co-authored discusses new markers of early renal impairment in patients with thalassemia, as well as changes in ultrasound.

Dr. Dimova's monograph is dedicated to the onset of cardiovascular changes in anemic syndromes - acquired and congenital.

The impact of iron deficiency anemia, as the most common deficiency in the world, on quality of life, rehospitalizations and prognosis in patients with heart failure is examined in detail. Not less attention is given to the current problems with iron deficiency and heart failure. This is an actively developed question that is most thoroughly addressed in the monograph, key studies on the topic, recommended diagnostic indicators and treatment strategies are discussed, as well as the latest guidelines for treating heart failure. It has been critically discussed that despite positive results in terms of functional capacity and global patient assessment, no reduction in mortality and hospitalizations for heart failure is achieved.

The impact of not only iron deficiency and iron deficiency anemia, but also folate and vit B12 deficiency anemia in patients with heart failure is reviewed in the monograph.

The scientific studies to date concerning anemia and ischemic heart disease, anemia and hypertension, anemia and rhythmic disorders are presented separately.

Anemia as a major factor leading to cardiovascular involvement is discussed in a separate chapter in the monograph.

Another important part of the monographic work is devoted to congenital haemolytic anemia-thalassemia, sickle cell anemia, and some even more rare anemias. Cardiovascular involvement of these less known conditions to the cardiology community has not been reported so far in the scientific literature in Bulgaria. The mechanisms of iron deposition in the myocardium and vessels, the hemodynamic consequences and treatment options are examined. Other pathophysiological mechanisms of cardiac injury have been critically discussed. His own experience in the field is also presented.

Cardiovascular disorders in thyroid pathology are also of scientific interest. Some less commonly discussed abnormalities are presented, such as pulmonary hypertension in hyper- and hypo-function; the need for anticoagulant therapy for atrial fibrillation in thyreotoxicosis.

Part of the scientific work is devoted to heart failure, which presents the application of biomarkers for risk stratification, the negative experience with the use of erythropoietin-stimulating agents for the treatment of heart failure and little clinical experience with SGLT2 inhibitors has been shared in diabetics with heart failure with persistent ejection fraction.

4. Educational and teaching activities:

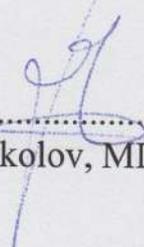
Dr. Dimova is a Chief Assistant in the Department of Propaedeutics of Internal Medicine and teaches students in the 3rd year in English language program.

The workload for the last 5 years is as follows:

2014/2015 - 180 academic hours
2015/2016 – 174 academic hours
2016/2017 – 180 academic hours
2017/2018 – 156 academic hours
2018/2019 - 168 academic hours

In conclusion, Dr. Maria Dimova is an internist, cardiologist, with extensive knowledge in the field of ultrasound diagnostics and various scientific interests. She has good teaching experience. Her scientific output is sufficient in volume and covers than the minimum state requirements and shows a variety of interests, publications are in different journals. It complies with the requirements of the Academic Staff Development Act in the Republic of Bulgaria and the Rules for the Academic Staff Development in the Medical University of Varna. This gives me reason to recommend to the honorable members of the scientific jury to vote positively for of the academic position of Associate Professor to Dr. Maria Stoyanova Dimova-Mileva, MD.

20.09.2019
Plovdiv


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prof. F. Nikolov, MD, PhD