

APPRAISAL

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Re: Competition for the academic position “associate professor” in the field of 7. Healthcare and Sports
7.1 Medicine and medical specialty 03.01.47 Cardiology for the needs of Section of Education, First
Department of Internal Diseases at the Faculty of Medicine – 0.5 regular position, and for the needs of
Second Clinic of Cardiology (non-invasive) – 0.5 regular position, at the University Saint Marina
Government Hospital

General data concerning the competition

The competition for the academic position “associate professor” is announced in the Official gazette of the Republic of Bulgaria, No.17 / 26 Feb 2021 on the basis of decision of a Department meeting No. 102-3011 / 16 Dec 2020

I have been specified as an outward member of the Scientific Jury for the academic position “associate professor” by a written order of the Proctor of Varna Medical University (No. R-109-175 / 23 Apr 2021), and the decision to prepare an appraisal was taken at a meeting of the Scientific Jury (Record No.1 / 7 May 2021)

Two candidates: Antoniya Rumenova Kisheva, MD, PhD and Lilyana Georgieva Mircheva, MD, PhD have documents for the competition

I have received all the documents which are necessary for preparing the present appraisal from the Department of Career Development at Varna Medical University “Prof. Paraskev Stoyanov” (outgoing No. 109-382 / 28 May 2021).

The appraisal, which is grounded below, is compliant with the Law of advancement of the academic staff in Republic of Bulgaria, the Regulations for its application, and the Regulations for advancement of the academic staff in Varna Medical University “Prof. Paraskev Stoyanov”.

Appraisal of Lilyana Georgieva Mircheva, MD, PhD

Professional experience

She graduated medicine at Varna Medical University in 2004 (Diploma No. 7543), and gained specialty in Cardiology (Certificate No. 017552 / 20 March 2014). Dr. Mircheva completed successfully a long-term postgraduate training in heart failure at the Zurich University (2014-2015) which was accredited by the European Society of Cardiology. She is in a possession of Certificate of Echocardiography: expert level (No. 0378 / 20 April 2017), and held a training in transesophageal echocardiography (Certificate No. 9401-0050/ 10 Feb 2017).

Professional advancement:

- 2004 – 2006 general practitioner in Varna
- 2007 – 2018 assistant professor at Varna Saint Marina University Hospital
- 2018 – 2021 chief assistant professor at Varna Saint Marina University Hospital

Dr. Mircheva is a member of the European Society of Cardiology, Bulgarian Society of Cardiology and its associated Working Group on Heart Failure and Cardiomyopathies in which she is a nucleus member of the HOT (Heart Failure of Tomorrow) group. Dr. Mircheva a member of the Managing Committee of the Society of Cardiac Sonographers “Varna Echo”, and a member of Heart-Lung Association. She is a reviewer of Bulgarian Cardiology Journal.

Scientific research activity

Dr. Mircheva has submitted publications (articles and abstracts) for participation in the competition as follows:

- Total number of published articles – 15, whereas:
 - 0 in peer reviewed and indexed journals
 - 0 in non-indexed journals
 - 2 have been applied for a PhD thesis
 - 5 have been applied for filling an academic position “assistant professor”
 - 8 in non-indexed journals, and out of the minimal National requirements (number of points = 45.25)

- Total number of published abstracts – 14, whereas:
 - 8 in peer-reviewed and indexed journals (number of points = 164)
 - 6 in non-indexed journals, not listed in the academic reference, and related to participation in Bulgarian scientific conferences (number of points = 0)

Other quantitative indices for the scientific research activity of Dr. Mircheva include:

- PhD thesis – 1
- Authored monograph – 1 on the following topic: “Congestion and Heart Failure” (Varna Medical University, 2020)
- Edited monographs – 2 (number of points = 40) on the following topics:

Rehospitalizations for Heart Failure. In: Kanazirev B., Georgiev B. Heart Failure – diagnostics and therapy. Arbilis, Sofia; 2017: pp. 205-219.

Oncology Medications which can suppress the myocardial contractility and deteriorate heart failure. In: Georgiev B., Trendafilova E. Acute and Chronic Heart Failure. Arbilis, Sofia; 2017: pp. 391-416.

- Oral presentations in scientific conferences – 16, whereas:
 - 1 international participation (Heart Failure Congress 2019, Athens, Greece, 26 May 2019)
 - 15 participations in Bulgaria.

Dr. Lilyana Georgieva Mircheva defended a PhD thesis in 2017 and obtained educational and scientific PhD degree on the following topic: “Optimized care for heart failure patients after hospital discharge” (Diploma No. 254 / 20 Dec 2017).

Dr. Mircheva participates in the real 29 publications in periodicals as follows:

- First author – 20 publications (70%)
- Second author – 4 publications (13.8%)
- Third author – 3 publications (10.3%)
- Dr. Mircheva has a critical personal participation in 20 of 29 publications (70%) – FLAE (“first-last-author-emphasis”): first author in 7 articles and 12 abstracts, and last author in 1 article.
- No publications as single author in periodicals (0%).

The results of the scientific research activity of the candidate are reported at prestigious meetings in Bulgaria and abroad (16 participations). Dr. Mircheva participates regularly (2013, 2015, 2017, 2018, and 2019) with scientific reports in one of the most esteemed conferences on heart failure in the world: European Heart Failure Congress.

Dr. Mircheva has participated as a coordinator in several multicentre clinical trials concerning the diagnostics and therapy of heart failure patients, acute coronary syndrome, and atrial fibrillation (APPRAISE-2, PARADIGM-HF, PARAGON, FINEARTS-HF, FOURIER, SELECT).

Impact factor and Citations

The total IF of the periodicals in which Dr. Mircheva has publications is equal to 57.066 according to an academic reference which is signed by the Director of Library at Varna Medical University “Prof. Paraskev Stoyanov” (outgoing No. 99 / 25 Mar 2021).

According to the same academic reference, the scientific reports of Dr. Mircheva are cited in 7 articles (total number of points= 50). The citations are in 6 Bulgarian periodicals and there is one citation in Int Heart J. 2019 Jul;60(4):899- 909 – Pei H et al. Ivabradine Improves Cardiac Function and Increases Exercise Capacity in Patients with Chronic Heart Failure: A Systematic Review and Meta-Analysis.

An examination of the scientific profile of Dr. Lilyana Mircheva in Google Scholar (<https://scholar.google.com/citations?user=yplTSYAAAAAJ&hl=bg>) proves that she has currently an H-index= 2.

The submitted scientific publications and citations cover the minimal National requirements in terms of amount and quality for participation in the competition.

The main scientific and research contributions (more than 20 of 29 real publications) of Dr. Mircheva are in the domain of heart failure. The first study in Bulgaria has been presented about ambulatory supervision and treatment of heart failure patients with II-IV NYHA class in a specialized ambulatory office. The heart failure compensation degree has been assessed by examination of NTproBNP, renal function, electrolytes, functional capacity by 6-minute walking test, left ventricular ejection fraction evaluated by echocardiography, quality of life questionnaires. It has been found that specialized observation reduces hospitalizations (including the earlier ones) and mortality while it improves the functional capacity, and hemodynamic and laboratory parameters. The strict education and medical supervision at an ambulatory consulting office results in improvement to II NYHA class in 50% of the patients. Dr. Mircheva has proved that early administration of Ivabradine in stabilized patients with exacerbation of heart failure results in improvement of symptoms, ejection fraction, quality of life, and functional capacity. Moreover, there is no significant correlation between the values of BNP and the 6-minute walking test. Both tests are important for the diagnosis of heart failure independently. The BNP levels depend mainly on hemodynamics, while 6-minute walking test is influenced by age and functional capacity. An important result of the scientific results is that the active screening of heart failure patients and early diagnosis and treatment of the depression may improve their prognosis. Factors have been established (age >63 years and dopamine use) which may worsen the prognosis of patients during ultrafiltration. Dr. Mircheva has studied thoroughly the heart failure peculiarities in patients with age above 75 years and has revealed a diverse and atypical clinical presentation, and pronounced multimorbidity (arterial hypertension, atrial fibrillation, anemia, and aortic stenosis). Dr. Mircheva has also established that hyperuricemia incidence is relatively high in heart failure patients, even in the absence of a chronic kidney disease. Uric acid levels correlate negatively with renal function and

ejection fraction. Iron deficit is common in patients with heart failure of various etiology and forms, regardless of the presence of anemia, and in addition to that female gender is more vulnerable.

The research activity of Dr. Mircheva constitutes a valuable contribution for the Bulgarian and international scientific community from scientific and practical point of view.

Educative and teaching activity

The references for the educative work-load and activity of Dr. Lilyana Mircheva are signed respectively by prof. Albena Kerekovska (Director, Educational activities) and Ludmila Boyarova (Head, Human resources) at Varna Medical University ““Prof. Paraskev Stoyanov””.

Dr. Mircheva has a teaching practice with a duration of 8 years 1 month and 3 days as of 16 Mar 2021, and educational work-load for a period of 5 years (2016-2020) as follows:

- 2016 – 178 hours
- 2017 – 146 hours
- 2018 – 216 hours
- 2019 – 214 hours
- 2020 – 128 hours

The educative and teaching activity of Dr. Lilyana Mircheva is sufficient for participation in this competition for conferring on her the academic position “associate professor” of cardiology.

Diagnostic and therapeutic activities

Dr. Lilyana Mircheva has proved excellent scientific and practical training in cardiology with international recognition and profound learning experience. She established the first specialized ambulatory office in Bulgaria for medical supervision of patients with heart failure, and developed an algorithm for follow-up of the patients as well as steps for reduction of unnecessary and avoidable hospital readmissions. Dr. Mircheva prepared instruction for the patients and their relatives aiming improvement of the quality of life. The ambulatory program for heart failure, which is called Cardiocare, is included in the international registry Optimize HF.

Conclusion

I consider that Dr. Lilyana Georgieva Mircheva fulfills the general and specific requirements for acquiring the academic position “ASSOCIATE PROFESSOR”. I suggest to the honored Scientific Jury to vote AFFIRMATIVELY for the decision that Dr. Mircheva should hold the academic position “ASSOCIATE PROFESSOR” in the field of 7. Healthcare and Sports 7.1 Medicine and medical specialty 03.01.47 Cardiology

18 June 2021

Signed by Prof. Tosho Balabanski, MD, PhD



