

To

The Chairman of the Scientific Jury,

Determined by Order № P-109-440/05.12.2024
of the Rector of the Medical University - Varna

I hereby submit:

Opinion

on the competition for the academic position of "Associate Professor"

in the field of higher education 7. Health and Sports, professional field 7.4. Public Health, specialty
"Public Health Management (Clinical Microbiology)"

announced in the State Gazette, issue 85 of 08.10.2024 for the needs of the Medical University -
Varna

Prepared by: Prof. Ilina Dimitrova Micheva, MD, PhD

Scientific specialty/s: Internal Medicine and Clinical Hematology

Institution: MU-Varna, Second Department of Internal Medicine, Department of Hematology

Address and contacts: University Hospital "St. Marina" EAD, Clinic of Hematology

Postal address: Varna 9010, 1 "Hristo Smirnenski" Blvd.

E-mail address: ilinamicheva@gmail.com

Phones: GSM +359896262300

OPINION

ON THE COMPETITION FOR THE ACADEMIC POSITION "ASSOCIATE PROFESSOR" AT MU-VARNA

I. Analysis of the candidate's career profile

Dr. Denis Sunay Niyazi graduated from higher education - Master of Medicine in 2018 with honors, and in 2023 he acquired a specialty "Clinical Microbiology" and a master's degree in "Public Administration with a specialization in Health Management". In 2022 he acquired the scientific degree "Doctor" in the scientific specialty "Microbiology" with a dissertation on the topic: "Study on bacteremias and invasive mycotic infections in patients after autologous and allogeneic hematopoietic stem cell transplantation"

Since 2019 Dr. Denis Sunay Niyazi has been working as an "assistant", and since 2023 as a "chief assistant" in the specialty Microbiology, Department of Microbiology and Virology, Medical University - Varna. He is fluent in English.

II. General description of the materials submitted for the competition.

The submitted set of materials on paper and electronic media includes the necessary documents specified in Art. 24 on the Terms and Procedure for Occupying the Academic Position "Associate Professor" from the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at MU-Varna.

III. Assessment of the candidate's scientific work for overall academic development.

General characteristics of the scientific production and publication activity

The works submitted for participation in the competition are 24 in total, 20 of which are to cover the minimum national requirements for acquiring the AD "Associate Professor", 1 is outside these requirements and 3 are submitted for acquiring the scientific degree "Doctor". Seventeen of the scientific publications are indexed in global databases (Scopus, Web of Science), and 3 are in non-refereed journals with scientific review.

A list of 17 participations in international and national scientific forums is also presented.

Participation in the implementation and management of scientific research projects

Dr. Niazi has directly participated in 3 scientific projects at the Fund Science - MU Varna as a researcher, with publications or presentations at several scientific forums.

GROUP OF INDICATORS A:

Dissertation for the award of the educational and scientific degree "Doctor" - 2022, with a dissertation on the topic: "Study on bacteremias and invasive mycotic infections in patients after autologous and allogeneic hematopoietic stem cell transplantation", MU-Varna, scientific specialty "Microbiology" - **50 points.**

GROUP OF INDICATORS B:

Habilitation thesis in the form of a monograph - **100 points.**

GROUP OF INDICATORS D: 384.71 points.

G7 Publications and reports published in scientific journals, referenced and indexed in world-renowned databases of scientific information (only Scopus and Web of science) - **319.71 points.**

G8 Publications and reports published in non-refereed journals with scientific review or published in edited collective volumes - **65 points.**

GROUP OF INDICATORS E:

Citations or reviews in scientific publications, referenced and indexed in world-renowned databases of scientific information or in monographs and collective volumes-**255 points.**

Scientific activity - dissemination and application of the candidate's scientific and practical achievements among the scientific community

The main areas of scientific activity of Dr. Niazi are infectious complications and antimicrobial resistance in patients with hematological malignant diseases and hematopoietic stem cell transplantation, SARS-CoV-2 and COVID-19 and mycotic infections.

In several publications, including 298 patients with hematological malignant diseases and 74 patients after HSCT, the incidence, risk factors and outcome of blood infections have been studied. A continuing trend for the dominance of Gram-negative bacteria in the etiological spectrum of

blood infections is established, with a persistent high level of ESBL producers among representatives of the Enterobacteriaceae family. A high proportion of carbapenem-resistant *Acinetobacter baumannii* is detected. A new, negative trend is the emergence of invasive carbapenem-resistant isolates from the Enterobacteriaceae family. The in vitro activity of a new combined antibacterial drug (ceftazidime/avibactam, CZA) against isolates demonstrating resistance to third-generation cephalosporins and/or carbapenems isolated from blood cultures and/or fecal samples of patients undergoing HSCT was studied. The species affiliation and antibiotic sensitivity of staphylococci obtained from blood cultures of patients after HSCT and with data on catheter-associated blood infection were studied.

Another topic in Dr. Niazi's scientific activity is SARS-CoV-2 and COVID-19. An anonymous survey was conducted among students from various Bulgarian universities on the readiness for vaccination against COVID-19 and the factors influencing their choice.

A study on the incidence of COVID-19 patients hospitalized at the University Hospital "St. Marina" - Varna during the first year of the pandemic (May 2020 - April 2021) demonstrated 40% positive for SARS-CoV-2 samples, with the most affected age group being 60-79 years.

136 samples with a "suspicious" PCR result were studied, which proves that "suspicious" results should be considered positive at the beginning or end of the infection. A study was conducted to determine the reliability of immunochromatographic tests for diagnosing infected patients. In a study including the clinical materials of patients hospitalized in the COVID-19 wards and intensive care units of the University Hospital "St. Marina" - Varna, a dominance of carbapenem-non-susceptible *Klebsiella* spp. was found. With a high frequency of the blaKPC gene associated with resistance to carbapenems of classes A, B and D.

Cases of mucormycosis after COVID-19 infection, a rare case of primary multifocal cutaneous mucormycosis in a two-year-old child with newly diagnosed acute lymphoblastic leukemia and a case of a man with invasive pulmonary mycotic infection caused by *Aspergillus* sp. and *Pneumocystis jirovecii*, complicated by reactivation of Cytomegalovirus after a second allogeneic hematopoietic stem cell transplantation have been described.

An experimental in vitro study was conducted on the effect of an ethanol extract of the aerial parts of the plant *Tagetes recta* L (Turta) on Gram-positive (*Staphylococcus aureus* and *Enterococcus faecalis*) and Gram-negative bacteria (*Escherichia coli* and *Pseudomonas aeruginosa*).

Several reviews address topics such as laboratory diagnostics of urinary tract infections, the clinical significance of *Serratia marcescens*, the emergence of vaccines, their health benefits, and the prevention of infectious and non-infectious diseases.

IV. Evaluation of the monographic work or equivalent publications submitted for participation in the competition for "ASSOCIATE PROFESSOR" by the candidate.

Dr. Niazi participates in the competition with a Habilitation work in the form of a monograph on the topic "Invasive aspergillosis in patients after hematopoietic stem cell transplantation".

The topic of Dr. Niazi's monograph concerns the causative agents of invasive aspergillosis (IA) - *Aspergillus* spp., characterized by high persistence, pathogenicity and virulence and high resistance to available therapeutic agents in patients after HSCT.

The author presents a historical review of the classification, morphology and structure of aspergillus as well as their distribution. The clinical forms of aspergillosis with different organ localizations, epidemiology, pathogenesis and the most important risk factors associated with HSCT are discussed in detail. The main emphasis in the monograph is on microbiological diagnosis with selection of material, collection and processing of samples, description of diagnostic methods. In the following chapters, medicinal products with antimycotic action are sequentially presented, considering the individual groups according to the mechanism of action - azoles, polyenes, echinocandins. A special place is given to future directions in treatment, presenting a number of new antimycotic preparations with cited data from current clinical trials. Methods for determining antimicrobial sensitivity and mechanisms of antimicrobial resistance of *Aspergillus* spp. are also discussed such as mutations leading to changes or overexpression of targets and mechanisms of increased efflux.

The last section of the monograph discusses recommendations for the management (prophylaxis, diagnosis and treatment) of IA in children and adults with underlying malignant hematological diseases or who have undergone HSCT, as well as the measures necessary to prevent nosocomial aspergillosis in immunocompromised patients.

V. Reflection (citation) of the candidate's publications in the national and foreign literature (publication image).

The citations reflecting the candidate's scientific activity are a total of 19 - 16 in publications, referenced and indexed in world-renowned databases and 3 in non-referenced journals with scientific review.

VI. Comprehensive, qualitative assessment of the educational, methodological and teaching activities, including scientific supervision of students, doctoral students, postgraduates.

Dr. Niazi has extensive experience as a lecturer. For the academic year 2018/2019 he is a part-time lecturer at the Department of "Microbiology and Virology" with a total of 340 hours of exercises and 40 hours of exams. For the period 2019-2024 at the same department there is a total of 1308 classroom hours. He has taught Medical Microbiology classes in Bulgarian to students of the specialties Medicine (III year), Dentistry (II year) and Pharmacy (II year); in English to students of the specialties Medicine (III year) and Dentistry (II year).

VII. Critical notes and recommendations.

VIII. Conclusion – meets / does not meet the mandatory and specific conditions and scientometric criteria – for the academic position of “ASSOCIATE PROFESSOR”.

Dr. Denis Sunay Niyazi is a young scientist with an impressive scientific career with high publication activity, mainly in journals indexed in Scopus and Web of Science with a total impact factor of 17.57. For his short medical practice, he has significant experience as a university lecturer, researcher in scientific projects and a specialist with in-depth knowledge in the field of microbiology and infectious complications in patients with hematological malignancies and hematopoietic stem cell transplantation. Dr. Denis Niyazi meets and even exceeds the mandatory conditions, quantitative criteria and scientometric indicators, according to the regulation for occupying the academic position of "Associate Professor" at the Medical University of Varna (total points collected - 789.71 out of the required 400).

With conviction, I recommend to the esteemed Scientific Jury to propose to the Faculty Council to award Dr. Denis Sunay Niyazi the academic position of "Associate Professor" in "Microbiology".

04/02/2025

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679

Prof. Dr. Ilina Micheva, MD