

To

the members of the Scientific Jury,

appointed by Order № P-109-440 / 05 Dec 2024

of the Rector of MU-Varna "Prof. Paraskev Stoyanov", Varna

Statement of Opinion

by Assoc. Prof. Ivanka Gergova, MD, PhD

Head of Microbiology Laboratory at the Department of "Microbiology, Virology, Clinical Laboratory and Immunology" of Military Medical Academy – Sofia,

an external member of the Scientific Jury

REGARDING: selection process for the **academic position of "Associate Professor"**.

Field of higher education: 7. Health and sports.

Professional field: 7.4. Public Health, specialty "Public health management (Clinical Microbiology)" for the needs of Clinical Microbiology Laboratory of UMHAT "St. Marina", Department of "Microbiology and Virology" of Faculty of "Medicine".

The selection process was announced in SG issue 85 of 08.10.2024 and with an Order № P-109-440 / 05 Dec 2024 by the Rector of MU-Varna "Prof. Paraskev Stoyanov", Varna.

I. GENERAL PRESENTATION OF THE PROCEDURE

1. Procedure

The current opinion was prepared in accordance with Order № P-109-440 / 05 Dec 2024 by the Rector of MU-Varna "Prof. Paraskev Stoyanov", Varna and with the decisions of the Scientific Jury appointed for the purpose, at which I was chosen as an external member of the Scientific Jury.

The only candidate in the announced competition is Denis Sunay Niyazi, MD, PhD, appointed as Chief Assistant Professor at the Department of "Microbiology and Virology", MU-Varna in 2023 where he continues to work.

The documents submitted under the procedure fully comply with the requirements of Law on Development of the Academic Staff of the Republic of Bulgaria (LDASRB) and the Implementing Regulations of the LDASRB of MU-Varna, in Section III. Conditions and procedure for holding the academic position of "Associate Professor", art. 122 - art. 130.

I declare I have no conflict of interest within the meaning of art. 4, para 5 of Law on Development of the Academic Staff of the Republic of Bulgaria.

2. Brief biographical and professional data for the candidate

Dr. Niyazi was born in 1993 and graduated as Master of Medicine at the MU-Varna in 2018. From 2019 to 2023 was a resident-physician, regular PhD student and assistant professor at the Department of "Microbiology and Virology", MU-Varna, and from 2024 currently is a specialist and a chief assistant professor at the same Department.

Since 2024 Dr. Niyazi is a specialist in "Clinical Microbiology". In 2022 he obtained an educational and science degree "Doctor" in scientific specialty of "Microbiology". In 2023 he acquired a Master's degree in "Public Administration and Health Management specialization".

The candidate is fluent in English.

II. EVALUATION OF THE SCIENTIFIC ACTIVITY

The candidate participates in the selection process with documents prepared in accordance with the requirements of the LDASRB and the Implementing Regulations of the LDASRB of MU-Varna.

Dr. Niyazi presents to the current selection process with a total of 26 scientific works, 24 of which are subject to peer review: a dissertation work, a monograph, 21 scientific articles (20 of which meet the minimum national requirements for obtaining the academic position "Associate Professor" and one outside these requirements).

The academic reference on publications, citations and scientific profiles of Dr. Niyazi, PhD (Library, MU-Varna, № 971/24.10.2024) provides evidence on Indicators: A1 - defended Dissertation work for the obtaining of educational and science degree "Doctor": 50 points; B3 – a monograph: 100 points. G7 - Publications and reports published in scientific journals, refereed and indexed in world-known databases of scientific information: 319.71 points; G8: Publications and reports published in non-refereed journals with scientific peer review or published in edited collective volumes: 65 points.

Dr. Niyazi clearly has a leading role in the presented research articles, as evidenced by his position as an author in the list of scientific publications - first author in 52% of the cases and second author in 29% of them. Seventeen of the scientific publications (85%) are indexed in world-known databases (Scopus, Web of Science).

The achieved Impact Factor (IF) is 17.57.

The significance of the results of Dr. Niyazi's research activity should be evaluated by the increased interest and citations by other authors - 19 times in total (2 of them in Bulgarian sources and 17 citations in foreign scientific journals, refereed and indexed in world-known databases of scientific information).

The results of the researches have been presented at 5 international and 12 national scientific forums.

The documents presented by Dr. Niyazi in the selection process exceed the minimum national requirements, as well as those required for the position of “Associate Professor” at MU-Varna.

III. SCIENTIFIC AND APPLIED DIRECTIONS AND CONTRIBUTIONS

Dr. Niyazi demonstrates broad research interests in the following main areas:

1. Infectious complications and antimicrobial resistance in patients with haematological malignancies and haematopoietic stem cell transplantation;
2. SARS-CoV-2 and COVID-19;
3. Mycotic infections;
4. Other areas.

In summary, the main scientific and applied contributions of Dr. Niyazi can be presented as follows:

- In the field of "Infectious complications and antimicrobial resistance in patients with haematological malignancies (HM) and haematopoietic stem cell transplantation (HSCT)".

In a study based on data from 298 patients with haematologic malignancies (2015-2020), the microbiological profile of the causative agents of bacteremia was summarized, and the frequency and antimicrobial susceptibility of the dominant bacterial species was determined [G7.5].

For the first time in Bulgaria, Dr. Niyazi conducted a study on the incidence, risk factors and outcome of bloodstream infections in patients after HSCT. The cumulative incidence of bacteremia was determined, the mean time from the transplantation to the onset of bacteremia was established, and risk factors for bloodstream infection after HSCT and the mortality rate (up to 30 days after HSCT and 4-month survival) were identified [G7.7].

The candidate conducted a study on the in vitro activity of ceftazidime/avibactam against isolates from blood cultures and/or fecal samples of patients who have undergone HSCT and were resistant to third generation cephalosporins and/or carbapenems [G7.6]. He conducted another study on the species affiliation and antimicrobial susceptibility of staphylococci isolated from blood cultures of patients after HSCT and with evidence of catheter-associated bloodstream infection [G8.1].

- SARS-CoV-2 and COVID-19:

In an anonymized survey of students from different Bulgarian universities, participants' willingness to be vaccinated against COVID-19 and the factors influencing their choice were identified [G7.1].

During the first year of the COVID-19 pandemic, Dr. Niyazi also participated in a study to determine the incidence of disease and the role of certain demographic factors in the development of COVID-19 on patients hospitalized at UMHAT "St. Marina"-Varna, [G7.2].

Over a period of two years (covering the first four waves of the pandemic), the candidate was involved in determining the incidence of SARS-CoV-2 positive samples in North-Eastern Bulgaria, the seasonal and regional distribution of COVID-19 cases in the same regions and comparing the data obtained with those from other European countries. The lack of seasonality of cases, the varying regional distribution and the differences in the incidence of infection in both genders and in relation to age during different periods were confirmed [G7.9]. Parameters of reliability of polymerase chain reaction (PCR) - based tests and immunochromatographic assays in the diagnosis were specified.

- In the "Mycotic infections" area:

In the monograph "Invasive Aspergillosis in Patients After Haematopoietic Stem Cell Transplantation," Dr. Niyazi thoroughly reviewed the classification, morphology, and ecology of *Aspergillus*. He introduced the clinical forms of aspergillosis, paying particular attention to invasive aspergillosis. He discussed the epidemiology, pathogenesis, and main risk factors for occurrence and adverse outcome and described in detail the recommendations for microbiologic diagnosis, prophylaxis, and treatment of invasive aspergillosis. The author's own studies were focused on the complications associated with invasive aspergillosis in patients undergoing hematopoietic stem cell transplantation [B3].

Dr. Niyazi described the first case of mucormycosis following COVID-19 infection in Bulgaria and confirmed the role of the viral infection and elevated blood glucose levels as risk factors for rhino-orbito-cerebral mucormycosis, as well as the need for a prompt and adequate multidisciplinary diagnostic process.

He also presented rare cases of primary multifocal cutaneous mucormycosis (in a two-year-old child with newly diagnosed acute lymphoblastic leukemia and in a man with invasive pulmonary mycotic infection caused by *Aspergillus* spp. and *Pneumocystis jirovecii* complicated by *Cytomegalovirus* reactivation). He analyzed the risk factors for mycotic infection, the diagnostic performance of PCR and the role of combined treatment (etiological and surgical) in the rapid control of the infectious process [G7.13; G7.16].

Dr. Niyazi also works in additional research areas:

- study on carbapenem-resistant Gram-negative *Enterobacterales* bacteria isolated from clinical specimens of patients with COVID-19 (St. Marina Hospital-Varna) [G7.14];

- laboratory diagnosis of urinary tract infections to identify at-risk patient groups, the most common uropathogens and the application of various laboratory diagnostic methods [G7.12];

- study of the epidemiological characteristics of *Serratia marcescens*, the symptoms of infection and the risk factors for its occurrence [G7.15] with a proposed DNA extraction protocol overcoming the effect of degradative enzymes produced by *S. marcescens* in the course of a molecular genetic study [G7.11];

- investigating the antibacterial effect of plant extracts, by experimentally establishing in vitro the effect of an ethanol extract of the aerial parts of the plant *Tagetes erecta* L on some Gram-positive and Gram-negative bacteria of clinical significance [G7.17];

- a comprehensive literature review on the origins of vaccines, their health benefits and prevention of infectious and non-infectious diseases, and the economic and social aspects of vaccine use [G8.3].

IV. TEACHING ACTIVITIES

Along with the scientific and diagnostic activities, Dr. Niyazi is also actively engaged in teaching, as his hourly workload exceeds the approved norms at MU-Varna (Reference for teaching workload issued by MU-Varna, Ex. № 112-475/24.10.2024).

V. PARTICIPATION IN SCIENTIFIC PROJECTS

In the period 2019 - 2024, Dr. Niyazi has participated in three scientific projects of the Science Fund (MU-Varna), in which he held the position of Principal Investigator ("Invasive bacterial infections in patients after autologous and allogeneic bone marrow transplantation: etiological spectrum and resistance to strategic beta-lactam and glycopeptide antibiotics", 19 DEC 2019 – 19 DEC 2022) and Investigator ("Antibiotic resistance, epidemiology and management of *Serratia marcescens* associated infections", 20 DEC 2021 – 20 DEC 2024; "Investigation of innovative markers of inflammation in children with septic and critical conditions", 20 DEC 2021 – 20 DEC 2024).

VI. COMPLIANCE WITH THE LDASRB REGULATIONS FOR ITS APPLICATION AND THE REGULATIONS ON THE CONDITIONS AND PROCEDURE FOR THE ACQUISITION OF SCIENTIFIC DEGREES AND ACADEMIC POSITIONS AT MU-VARNA

The materials submitted for the selection process fully comply with the requirements of the LDASRB, Law on the Application of LDASRB and the Regulations on the Conditions and Procedures for the Acquisition of Scientific Degrees and Academic Positions at MU-Varna.

The National Minimum Requirements in Higher Education are fully met: 7. Health and Sports; professional field 7.4. Public Health, in the specialty "Public Health Management (Clinical Microbiology)": indicators in group A1: 50 points; indicators in group B3: 100 points; indicators in group G5-9: 384.71 points; indicators in group D10-12: 255 points.

All additional quantitative criteria adopted at MU-Varna are also covered.

VII. CONCLUSION

The submitted documents, the candidate participates in the selection process, with fully comply with the requirements of the Law on the Development of Academic Staff of the Republic of Bulgaria and the Regulations of MU-Varna for its implementation.

The presented overall scientific research and teaching activity are indicative of effective and focused research work, with real scientific and applied contributions to science and diagnostic practice. The results of the researches have been published in leading foreign and national journals, and cited numerous times, and presented at international and national scientific forums.

The analysis of the scientific research activities, professional experience and scientific interests of the candidate participating in the competition clearly indicate that Dr. Niyazi is an established scientist with extensive theoretical knowledge and confirmed practical skills, in line with the needs of the Department of "Microbiology and Virology", MU-Varna for the selection process is announced.

I motivatedly give a **positive evaluation** and recommend the respective members of the Scientific Jury to support the election of Denis Sunay Niazi, PhD, to the academic position of Associate Professor in Public Health Management (Clinical Microbiology), for the needs of the Department of "Microbiology and Virology", Faculty of Medicine, University Hospital "St. Marina", Varna.

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