

To  
The Chairman of the Scientific Jury,  
determined by Order No. 106/07.04.2026  
to the Director of the National Center for Infectious and Parasitic Diseases  
To your Protocol No. 1/12.03.2026  
I present herewith:

## **REVIEW**

by Assoc. Prof. Dr. Vanya Rangelova Rangelova, MD,  
external member

**Scientific specialty:** Epidemiology

**Institution:** Medical University of Plovdiv, Faculty of Public Health, Department of "Epidemiology and Disaster Medicine", according to protocol No. 1/12.03.2026 of the meeting of the Scientific Jury, determined by order No. 106/07.04.2026 of the Director of the National Center for Infectious and Parasitic Diseases, Sofia

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REGARDING: conducting a procedure under the competition announced in the State Gazette, issue **15** of **06/02/2026** for the academic position of **Associate Professor** in the specialty "**Epidemiology**", professional field **7.1**. Medicine, field of higher education **7**. Health and Sports - one, for the needs of the Department "Epidemiology and Surveillance of Communicable Diseases" of the National Center for Communicable and Parasitic Diseases-Sofia.

**Candidate: one: Dr. Lili Emilova Marinova**, Head of the Department "Epidemiology and Surveillance of Communicable Diseases" of the National Center for Communicable and Parasitic Diseases-Sofia

The review was prepared in accordance with the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria - Terms and Procedure for Holding the Academic Position "Associate Professor".

### **I. Presented documents for the procedure for occupying the academic position "Associate Professor"**

The candidate has submitted a full set of documents in accordance with the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations of the National Center for Academic Staff Development. The materials meet the qualitative and quantitative criteria for holding the academic position "Associate Professor".

### **II. Analysis of the candidate's career profile**

Dr. Lili Emilova Rahamimova - Marinova graduated from the Medical University of Sofia in 1995 with honours. Between 1995 and 2001, she worked in the Department of Cardiology and Rheumatology of the National Multidisciplinary Transport Hospital "Tsar Boris III" - Sofia. Since 2001, in the Department of "Epidemiology and DDD" at the National Center for Infectious and Parasitic Diseases, she has successively held the positions of resident physician, research associate III degree (2003) and research associate II degree (2006) and chief assistant (2010) in the Department of "Epidemiology and Surveillance of Infectious Diseases". In the period 2011-2025, Dr. Marinova successively held the positions of chief expert, chief inspector, head of sector, head of the Department of "Epidemiology and Control of Infectious Diseases" and deputy Director of the Regional Health Inspectorate-Sofia. Since December 2025, the candidate holds the position of Head of the Department of Epidemiology and Surveillance of Communicable Diseases at the National Center for Infectious and Parasitic Diseases-Sofia.

In 2005, she acquired a specialty in "Epidemiology of Infectious Diseases".

In 2012, after successfully defending a dissertation on the topic "Epidemiology of Measles in Bulgaria in the Conditions of Elimination and Opportunities for Effective Surveillance", Dr. Marinova acquired the educational and scientific degree "Doctor" (PhD).

Dr. Marinova has actively upgraded her knowledge and skills with additional qualifications through participation in various trainings in the country and abroad. These include the following areas:

Epidemiology and Surveillance of Communicable Diseases: in Slovenia (2003), the Netherlands (2007), Spain (2007 and 2010), Sweden (2010 and 2011) and the United Kingdom (2012). Sofia (2021);

Vaccines and immunoprophylaxis in Sofia (2002 and 2006) and Finland (2009);

Early warning of crises related to biological weapons and bioterrorism in Romania (2005), Albania (2005), Portugal (2007) and Luxembourg (2008);

Epidemiological statistics in Sofia (2003, 2021);

Risk analysis and cybersecurity – Sofia (2023, 2025);

Dr. Marinova's participation in national and international projects and programs is impressive - 20 in total. It should be noted that in three of them Dr. Marinova is the project manager.

Dr. Marinova participated in the creation of 6 implementations and other scientific and applied developments at the National Center for Infectious and Parasitic Diseases.

The candidate has a C1 level of English and Russian, which will be useful for contacts with researchers abroad, a basis for qualification and growth. She has excellent computer skills, including administration and management of national specialized information pages for epidemiological surveillance, data delivery and analysis in the specialized web portal for surveillance of infectious diseases TESSy of ECDC.

**Membership:** Bulgarian Medical Union, Bulgarian Scientific Society for Epidemiology of Infectious and Non-Infectious Diseases, South-East European Medical Forum.

### III. Evaluation of the scientific works, citations and the overall academic development of the candidate

In the current competition, Dr. Marinova participates with a total of 43 scientific papers, which do not repeat the evidentiary material under the previous procedure, as follows: a dissertation for the award of the ESD “Doctor,” (PhD), 13 full-text publications referenced and indexed in Scopus/Web of Science (5 of them with an impact factor), 27 full-text publications in peer-reviewed publications not referenced in world-renowned databases, 1 monograph, and 1 practical guide for healthcare workers and healthcare mediators.

The dissemination and application of the candidate's scientific and practical achievements among the scientific community determine the scientific activity, visible in the publications in authoritative and peer-reviewed scientific journals such as - Eurosurveillance, Vac-cine, Comptes rendus de l'Academie bulgare des Sciences, European Journal of Public Health, Problems of Infectious and Parasitic Diseases, etc.

After specifying the reference for the candidate's citations, it should be noted the serious response of the results of her studies with a total of 210 citations in the scientific literature, of which 149 are in scientific publications referenced in Scopus and Web of Science. The total IF-434.05 of the citations also makes a strong impression, which supports the publication image of Dr. Marinova.

**The habilitation work - monograph** entitled "Effects of the COVID-19 pandemic on the implementation of the National Immunization Program in the Sofia City District" is focused on a detailed study of the COVID-19 pandemic and a systematic review and assessment of its impact on the implementation of the National Immunization Calendar and the overall immunization policy implemented in the territory of the city of Sofia and attitudes towards influenza vaccination among different groups of the population". The immunization coverage and trends in mandatory immunizations and revaccinations against tuberculosis, diphtheria, tetanus, pertussis, poliomyelitis, Hib infections, hepatitis B, measles, mumps, rubella and pneumococcal infections have been analyzed. The factors that contributed to the difficulties in the implementation of the immunization program have been summarized, as well as proposals for optimizing the immunization policy and improving the resilience of the health system in future crisis situations. The results obtained are of important importance for public health and can be used in planning of policies in the field of immunoprophylaxis and health crisis management.

I would also like to note the published **practical guide “Let's talk about disease prevention. How to increase the number of childhood immunizations,”** which she provides in the evidence material. The guide was developed based on evidence and good European practices and aims to assist health workers and health mediators in effective communication with parents and vulnerable groups about the benefits of immunizations. The work is particularly relevant because it examines the causes of incomplete immunization coverage, vaccine hesitancy, and the role of misinformation as a risk factor for the occurrence of epidemic outbreaks. A significant contribution of the guide is its practical focus—specific models for communication with families, techniques for overcoming vaccine fears and strategies for working with hard-to-reach population groups are provided. This has direct relevance for

improving immunization coverage and limiting the risk of spreading vaccine-preventable diseases.

In the 13 publications published in scientific journals, referenced and indexed in world-renowned databases of scientific information—Scopus and Web of Science, Dr. Marinova is the first author in 5 and second in 4 imprints—69%, i.e., highlighted activity. Out of 13 publications, 5 are in Impact factor journals with a total IF - **19.587**.

Dr. Marinova provides information on 27 publications in non-refereed scientific journals; in 7 of them she is the first author and in 5, the second author, which represents 44%, also highlighted activity.

In addition, the candidate provides a list of reports and abstracts of reports printed in specialized scientific journals from 36 participations in scientific forums (4 of which abroad), which emphasizes her activity and presentation to the scientific community of her scientific and practical achievements.

Dr. Marinova's project activity is impressive. She participates in a total of 20 national and international projects and programs. It should be noted that in 5 of them she is a leader/coordinator, as follows:

**2014-2016**—National Coordinator in the VENICE III Project—“Network for Monitoring and Evaluation of European Immunization Systems” (VENICE III Project “Vaccine European New Integrated Collaboration Effort Project).

**2011-2012**—Project Manager of the Country Information Project (CIP): Preparation of a country profile on activities and institutions in the field of infectious disease surveillance, support for activities on bilateral exchange of epidemiological, scientific, and operational information (Service contract No. 4-ECD.3006).

**2010-2011** - Project Manager of the “Analysis of the factors leading to the spread of measles in Bulgaria in 2009-2010 among vulnerable population groups” (Service contract No. ECD.2507).

**2010-2011** - Project Manager of the Country Information Project (CIP): Preparation of a country profile on activities and institutions in the field of surveillance of communicable diseases, support to activities on bilateral exchange of epidemiological, scientific and operational information (Service contract No ECDC/08/022).

**2010-2011** - National coordinator in the surveillance network for vaccine-preventable diseases (VPD Network) of the long-term ECDC program on vaccine-preventable diseases and invasive bacterial infections.

#### **IV. Main directions and thematic areas of applied scientific works and contributions of the candidate:**

The scientific activity of Dr. Lili Marinova, PhD, is characterized by a clearly established thematic focus, consistency, and high public health significance. The main scientific directions in her work cover epidemiology, surveillance and prophylaxis of vaccine-preventable infections, immunization policy, information systems in public health, and control of emerging and socially significant infectious diseases. Her scientific developments are distinguished by an interdisciplinary approach, combining classical epidemiological analysis, molecular-

epidemiological methods, health communication, and organizational-applied aspects of public health.

A leading place in the candidate's scientific activity is occupied by studies on epidemiology, surveillance, and elimination of measles, rubella, and mumps. Her research is focused on the analysis of the epidemic process in the conditions of an elimination strategy, the assessment of the risk of the spread of infections, the role of immunization coverage, and the factors supporting the circulation of wild virus strains. Particularly significant are the developments related to the measles epidemic in Bulgaria in 2009–2010, including studies on the nosocomial spread of the infection, the molecular biological characteristics of circulating viruses, and the effectiveness of epidemiological surveillance systems.

An important scientific direction in Dr. Marinova's work is immunoprophylaxis and immunization policy. Her scientific developments are aimed at assessing the effectiveness of vaccination programs, studying the factors influencing immunization coverage, and developing strategies for increasing public trust in vaccines.

Another important emphasis in the candidate's scientific work is information systems and registries in the field of immunizations and epidemiological surveillance. Dr. Marinova actively participates in the development and improvement of information systems for collecting, analyzing and interpreting data on the incidence of measles and other vaccine-preventable infections. Her scientific developments in this area are aimed at optimizing surveillance, increasing the sensitivity and specificity of registration systems, and bringing them closer to European standards and requirements of the World Health Organization.

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I accept the report on the contributions of scientific developments presented by Dr. Marinova.

The scientific contributions of Dr. Lili Marinova, PhD, can be defined as significant, up-to-date, and of a markedly original and scientifically applied nature. They are mainly focused on epidemiology, surveillance, and prevention of vaccine-preventable diseases; immunization policy; and the improvement of public health systems.

Among the contributions of an original scientific nature, the detailed study of the COVID-19 pandemic in the Sofia City District and the analysis of its effects on the implementation of the National Immunization Program should be highlighted. Based on a large volume of epidemiological data, a significant decrease in immunization coverage during the pandemic was established, which creates prerequisites for the occurrence of epidemic outbreaks of vaccine-preventable diseases. The main factors that led to this were analyzed: the

involvement of the health system with COVID-19, anti-epidemic measures, and increased fears among parents about vaccinations in a pandemic situation.

A particularly significant contribution is the study conducted for the first time in Bulgaria on the influence of socio-economic factors on the severity of measles and the frequency of severe complications. Using regression analysis, the importance of maternal education, the availability of immunization status and permanent household income as factors reducing the risk of severe complications in sick children has been proven. The study is of great importance for clarifying the role of social determinants in the course of vaccine-preventable infections.

The original contributions should also include the study conducted for the first time in our country on the attitudes of various target groups towards vaccines and immunizations to identify the reasons for the formation of “pockets” of unimmunized populations. As a result of the studies conducted, practical guides and training materials for medical specialists have been adapted and developed, aimed at improving communication with parents and vulnerable groups on issues of immunoprophylaxis.

Contributions of a scientific and applied nature also occupy a significant place. An assessment of the implementation of the National Immunization Program in Sofia City District during the COVID-19 pandemic was carried out, and based on the results, specific proposals were formulated for improving the immunization strategy—organizing catch-up immunization campaigns, improving coordination between institutions, stimulating the activities of general practitioners, and implementing a national immunization registry.

The assessment of the effectiveness of the information system for collecting and analyzing data on measles incidence is also of scientific and applied value. As a result of the analysis, the system was further developed and improved by introducing new functionalities related to the registration and analysis of epidemiological data, tracking outbreaks, and registering investigated and rejected cases. In this way, the system was brought into greater compliance with European requirements for sensitivity, specificity, and timeliness of epidemiological surveillance.

## **V. Assessment of the candidate's teaching activity**

Dr. Marinova provides a report on the teaching workload at the Medical College "Yordanka Filaretova" at the Medical University of Sofia. The complex qualitative assessment of the teaching, methodological, and teaching activity includes a report on classroom employment by year. The candidate's teaching workload by year from 2022/2023 is 90 hours of lectures, 75 hours of practical exercises, and 24.9 from participation in exams. Respectively for 2023/2024 - respectively 90 hours of lectures, 75 hours of practical exercises, and 21.12 hours of exams.

**VI. General assessment of the candidate's compliance with the minimum national requirements, respectively the requirements of ASDARB and the requirements specific to the Regulations for Academic Development of the National Center for Infectious and Parasitic Diseases**

Dr. Lili Marinova participates in the competition for the academic position of Associate Professor with scientific production qualitatively and quantitatively, in accordance with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations on the Development of the Academic Staff of the National Center of Infectious and Parasitic Diseases. With a minimum required number of points of 400, Dr. Lili Marinova has presented evidence for a total of 3603.3, i.e. many times over the required minimum.

Distribution of scientific production according to Scientometric indicators and other indicators related to teaching, specialty and current position required for occupying the academic position of Associate Professor in professional field 7.1. Medicine, field of higher education 7. Health and Sports

**A1.** Dissertation for the acquisition of the educational and scientific degree "Doctor" on the topic "Epidemiology of measles in Bulgaria in the conditions of elimination and possibilities for effective surveillance" - **50 points.**

**B3.** Habilitation work - monograph - **100 points.**

**Г7.** Publications and reports published in scientific publications, referenced and indexed in world-renowned databases with scientific information - 13 in Scopus and Web of Science with a total number of **160.6 points.**

**Г8.** Publications and reports published in non-refereed journals with scientific review or published in edited collective volumes - 27 - **237.7 points.**

**Д10.** Citations (only Scopus and Web of Science) - 149 citations of 10 articles - **2235 points.**

**Д12.** Citations or reviews in non-refereed journals with scientific review – 61 citations of 7 articles – **305 points**

**E15** Acquired medical specialty- **40 points**

**E16.** Participation in a national scientific or educational project - 5 projects of 15 points each - **75 points**

**E17.** Participation in an international scientific or educational project - 10 projects of 20 points each - **200 points**

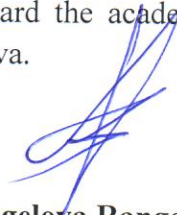
**E19.** Management of an international scientific or educational project- 5 projects of 40 points each - **200 points**

**Critical remarks** - I have no critical remarks about the candidate.

**Conclusion:**

Dr. Lili Marinova is known as a respected and highly qualified specialist and scientist in the field of infectious disease epidemiology. The main areas in which the candidate has focused her efforts are relevant and significant. Her scientific works are original and precisely published, which convinces that the results obtained by her are of high practical value.

Dr. Lili Marinova, MD meets the mandatory and specific conditions and covers the recommended scientometric criteria for the academic position "Associate Professor" according to the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff of the National Center of Infectious and Parasitosis Diseases, Sofia. I give my positive assessment and propose to the members of the esteemed jury to give a positive vote to award the academic position of "Associate Professor" to Dr. Lili Emilova Rahamimova-Marinova.



**22.05.2026**

**Assoc. prof. Vanya Rangelova Rangelova, Md, PhD**