

To

**The Chairperson of Scientific Jury determined by
Order № I-45/26.03.2025 of the Director of
Institute of Microbiology “Stefan Angelov” - BAS**

REVIEW

by

Assoc. Prof. Nikolay Manchev Petrov,

Director of the Biological Sciences Program Council – NBU,

Professional field 4.3. Biological Sciences, Specialty: Virology,

Member of the Scientific Jury according to Order No. I-45/26.03.2025 of the Director of the
Institute of Microbiology "Stefan Angelov" - BAS

Regarding: evaluation of the candidate Lora Simeonova Simeonova, the only participant in the competition for academic position "Associate Professor" in the Field of Higher Education 4. Natural Sciences. Mathematics and Informatics, Professional Direction 4.3. Biological Sciences, Scientific Specialty Virology, announced in the State Gazette No. 11 of 07.02.2025 for the needs of the Department of Virology, Laboratory "Experimental Influenza Chemotherapy" - IMikB - BAS

1. General presentation of the documents in the competition

The competition is in the Professional Direction 4.3. Biological Sciences (Virology) for the needs of the Department of Virology, Laboratory "Experimental Chemotherapy of Influenza" and is announced in the State Gazette, issue 11 of 07.02.2025. My participation in the scientific jury is in accordance with Order No. I-45/26.03.2025 of the Director of the Institute of Microbiology "Stefan Angelov" - BAS. The candidate Lora Simeonova Simeonova has meticulously prepared a set containing all the necessary documents, which were provided to me in electronic form.

2. Candidate information

The only candidate in the competition for associate professor is Dr. Lora Simeonova Simeonova, Chief Assistant Professor in the Department of Virology, Laboratory "Experimental

Chemotherapy of Influenza" of the Institute of Microbiology - BAS. Dr. Simeonova graduated from the Faculty of Biology of Sofia University "St. Kliment Ohridski", where she successively obtained the "Bachelor" degree in "Molecular Biology" in 2003 and the "Master" degree in "Virology" in 2005. In 2011, she received the "Doctor" degree (Specialty "Virology", code 01.06.13) with the scientific supervisor Acad. Angel Galabov, MD, D.Sc. at the Institute of Microbiology "Stefan Angelov" - BAS. The topic of her dissertation is "Study of the combined effect of rimantadine and oseltamivir against influenza virus A". From 2005 to 2007 she worked as a specialist, and from 2007 to 2015 she was an assistant in the laboratory "Experimental Chemotherapy of Influenza", Department of Virology. Since 2015 she has been a Chief Assistant, and since 2012 she has been the Head of the Laboratory "Experimental Chemotherapy of Influenza", Department of Virology, Institute of Microbiology "Stefan Angelov", Bulgarian Academy of Sciences. In addition, she was a Molecular Biologist in the Laboratory of Virology, University Hospital Medical School "N.I. Pirogov" in the period 04.2020 - 08.2021. She is a member of the Union of Scientists in Bulgaria, Section of Microbiology.

In the period 2008 - 2024 Dr. Simeonova participated in courses to improve her qualification in 6 international Institutes – Pasteur Institute Paris, France, Pasteur Institute Hong Kong, Pasteur Institute – Korea, Santa Margherita Di Pula, Cagliari, Sardegna, Italy, Institute of Molecular Virology, Munster, Germany, Sciensano Institute, Brussels, Belgium, where she improved her practical professional skills and theoretical scientific training.

She won the award for “Best Scientific Publication by a Young Bulgarian Microbiologist” for 2012 from the “Acad. Prof. Dr. Stefan Angelov” Foundation.

3. Teaching activities

From 2007 to the present, she has been a part-time assistant professor, specialty "Molecular Biology", "Pharmacy" - English language at Sofia University "Kliment Ohridski", and since 2009, she has been a part-time lecturer in biology and chemistry in English at the Lebanese School "Jubran Khalil Jubran", Sofia.

Dr. Simeonova participates in the preparation of bachelor and master diploma students. She is the scientific supervisor of one diploma student, who defended in 2022 the "Bachelor" and in 2024 the "Master" at NBU, with the topic of chemotherapy of Influenza. She has prepared 29 reviews of publications for scientific journals.

Dr. Simeonova has also participated in additional employment: 1) "Public Relations", Institute of Microbiology, Bulgarian Academy of Sciences from 02.2011 -03.2015; 2) Responsible for maintaining the website of the Institute of Microbiology, Bulgarian Academy of Sciences; 3) Translator "Prosima EOOD" - medical, pharmaceutical documentation to/from English and Russian from 2015 - to date; 4) Secretary of the "Acad. Prof. Dr. Stefan Angelov" Foundation 2022 - to date; 5) Secretary of the National Seminar on Virology at the Department of Virology, Institute of Microbiology "Stefan Angelov" -2022 - to date.

4. Fulfillment of the requirements for holding the academic position

In the competition for Associate Professor, Dr. Lora Simeonova participated with 20 scientific publications (5 in Group B; 13 in Group D, 2 in non-refereed journals). Publications from Group B form 102 points. Out of the required minimum of 100 points. 18 of the scientific publications are referenced and indexed in world-renowned databases with scientific information (Web of Science and Scopus) and 2 are in non-refereed publications. All publications in Group D form 236 points (with a minimum requirement of 220) according to the Appendix to the PPZRASRB. The total number of publications in international journals with an impact factor is 14, without IF, but with SJR – 4.

Dr. Simeonova is the first author in 2 scientific publications, the second author is in 3 scientific publications, the third and subsequent author is in 13 scientific publications, which are referenced and indexed in world-renowned databases with scientific information (Web of Science and Scopus). The reference by criteria Group D shows a large number of citations in refereed and indexed databases (50 citations in Scopus, 100 t, with a required minimum of 60). The review of the database in Scopus shows that the candidate has 189 citations in refereed journals and a Hirsch index of 8. Overall and separately by groups of criteria, the candidate exceeds the minimum requirements of the ZRASRB and the Regulations for its application for occupying the position of "Associate Professor", as well as the additional requirements of the Institute of Microbiology - BAS for the position of "Associate Professor".

5. Expert activity

The main research and expert activity of Senior Assistant Professor Dr. Lora Simeonova is entirely in the field of virological studies of Influenza type A and B and is aimed at studying the antiviral properties of both new substances of natural and synthetic origin, as well as at developing alternative approaches to improve the outcome and limit the pathology of Influenza virus infections. Scientific research focuses on genetic and phenotypic markers in viral pathogens, such as drug resistance and carcinogenesis, and respectively follows the mechanisms of pathogenesis in models of cell lines susceptible to virus infection in vitro and experimental animals with assessment of the protective immune response of the host and the influence of the tested therapy on it. Particular attention is paid to the study of the antiviral activity of substances with proven antimicrobial activity, included in systems optimized for more efficient delivery to target cells and to the establishment and demonstration of the effect of nano-drug carriers on viral replication and extracellular virions. The main viral models on which scientific research is focused include representatives of the Orthomyxoviridae, Coronaviridae and Herpesviridae families. To a lesser extent, the candidate's work is based on Picornaviridae and Adenoviridae, and it mainly concerns the selective screening of compounds and/or products for virucidal activity.

6. Participation in congresses and other scientific forums

In the period 2014 - 2023, Dr. Lora Simeonova has a total of 28 participations in national and international scientific forums, of which 12 were poster presentations and 16 were oral presentations. Seventeen of the participations were abroad.

7. Project activity

Dr. Lora Simeonova has participated in a large number of projects (9), and she is the head of two of them. The projects are funded by the Bulgarian National Research Fund (4), Sofia University "Kliment Ohridski" (1), Medical University – Varna (2), Institut Pasteur (1) and the Operational Program "Human Resources Development" at MES. All of them are related to the main topics of her scientific activity.

8. Conclusion

Chief Assistant Professor Dr. Lora Simeonova is a young and promising scientist with excellent knowledge of the problems of human viral infections, and specifically Influenza, on which she has been working for almost 19 years. She has already built a vision for her future scientific development and the development of the direction in the Department. She intends to continue her scientific path in studying the pathogenesis of influenza infection, developing strategies, searching for new compounds, including substances of natural origin, and developing new pharmaceutical forms to increase the effectiveness of antiviral therapy/prophylaxis. For their implementation, she will seek additional collaborations and scientific projects to discover new antiviral agents and clarify their mechanism of action. I believe that with her irreplaceable experience and skills she would contribute to the development of chemotherapy of influenza infection in the Department of Virology at the Institute of microbiology - Bulgarian Academy of Sciences.

Based on the submitted materials and analysis of the achievements, I give a POSITIVE assessment to the candidate and fully support the appointment of Chief Assistant Professor Dr. Lora Simeonova Simeonova to the academic position "Associate Professor".

12.06.2025 г.

Подпис:

(Доц. Н. Петров)