

STATEMENT

Written by: **Assoc. Prof. Stefka Krumova Ivanova, PhD**

Head of National Reference Laboratory “Measles, Mumps, Rubella”, Department Virology, National Centre of Infectious and Parasitic Diseases (NCIPD), member of a scientific jury, determined by the order of the Rector of SU "St. Kliment Ohridski", № RD-38-543/18.09.2023

By competition for the academic position "**Associate Professor**" in the field of higher education, professional direction: 4.3. Biological sciences (Virology - molecular virology), for the needs of the SU "St. Kliment Ohridski", published in the Official Gazette, no. 65, 28.07.2023

I declare that I have no co-authored publications and no conflict of interest with the candidate and I am not a related person, in the sense of para 1, item 3 and 5 of the Development of Academic Staff in the Republic of Bulgaria Act (DASRBA).

1. Submitted materials for the competition.

The materials provided for my opinion are from Kalina August Shishkova, PhD, the only candidate participating in the competition. The documents are in accordance with the requirements of the Development of Academic Staff in the Republic of Bulgaria Act (part 3, item 24-26), the Regulations and item 109 (2) from the Regulations on the terms and conditions for acquiring scientific degrees and occupying academic positions at SU "St. Kliment Ohridski".

The materials for the contest are perfectly systematized and include: a curriculum vitae; copies of diplomas for completed higher education - Master's Degree and for PhD; certificate of work experience in the specialty and continuing employment contract with SU "St. Kliment Ohridski"; list/reference of scientific publications; participation in scientific projects and scientific contributions in the specialty; participation in scientific forums; a table with the covered required points by group of indicators according to the national criteria for acquiring

the academic position "Associate Professor"; citation reference; reference for educational employment; author reference for scientific contributions.

2. Analysis of the candidate's professional and academic development

Kalina August Shishkova, PhD, was born on 10.10.1970 in the city of Sofia. She graduated with a master's degree, majoring in "Molecular Biology" in 1997 at the SU "St. Kliment Ohridski", Faculty of Biology and PhD in 2014 with the topic of his dissertation: "*Distribution and genetic diversity of Torque teno viruses (family Anelloviridae) in Bulgaria*". Her professional development is entirely related to the field of virology (study of the mechanism of antiviral activities of materials of natural and synthetic origin and medical virology), working as a specialist virologist initially at the Institute of Microbiology, BAS, and subsequently as a part-time assistant, assistant and chief assistant at SU "St. Kliment Ohridski", Faculty of Biology.

The preparation of PhD, its growth to ch. assistant, the candidate's active teaching and research activities are evidence of upward professional development and aspiration for academic enrichment.

3. Evaluation of the candidate's scientific works.

The documentation provided to me from Kalina August Shishkova, PhD, are correctly formatted, including summary lists and comprehensive evidentiary material for them. It covers the candidate's research activity for the period 2009 - 2023, or a total of 33 scientific works, of which 21 are selectively presented for this competition and are in foreign quartile journals. Dr. Kalina Shishkova is also the co-author of the Guide for practical classes in Virology, an important aid in the educational process of masters and specialists in Virology. The total calculated Impact Factor is 32.885. Four of her publications are in Q1 journals, six each in Q2 and Q3, and 5 in Q4.

The presented citations of publications in international systems, including Scopus or Web of Science, are 137, the main part being in the last 5 years. This undeniably confirms the importance of the scientific works of the candidates and their knowledge from international collectives and renowned journals in the field of virology and medicine.

Participation in scientific conferences and congresses is a total of 48, of which 31 in international forums.

The project activity of Kalina Shishkova, PhD is expressed in participation in 20 scientific research projects, financed by the Ministry of Education and Science, SU "St. Kliment

Ohridski" and MRRB. The latter confirms her affinity for science, the development of new approaches and the study of experimental model systems in the field of medical virology and molecular biology.

4. Contributions from scientific research activity.

The main directions in the scientific developments of Dr. Kalina Shishkova are related to the study of natural and synthetic products for antiviral activity and medical virology. Her research interests focus on socially significant diseases caused by HSV-1 and 2, HPV. This also defines the main contributions of her research activity in the context of experimental and medical virology, namely:

- **Screening of natural products for antiviral activity** - research on the antiherpetic activity of extracts isolated from in vitro grown plants (antiviral activity of extracts obtained from Bulgarian medicinal plants), including species protected by the Biodiversity Act, of medical interest, as well as a study of the probable mechanisms of the antiviral effect and establishment of potential opportunities for the development of anti-herpes preparations and their application in human medicine.
- **Study of new synthetic compounds for the presence of anti-herpes effect** - study of the biological activity of new amides of hydroxycinnamic acid of thiazole; new acyclovir esters with peptidomimetics; esters of the antiherpetic drugs ganciclovir and penciclovir with bile acids (cholic, chenodeoxycholic and deoxycholic) and amino acid esters of acyclovir; human coronavirus 229E (HCoV-229E) study to evaluate the in vitro efficacy of some analogs of the ion channel inhibitors amantadine and rimantadine.
- **Medical virology** - demonstration for the first time in the country of Torque Teno viruses by adapting different primer systems, in samples from blood donors, patients with registered viral hepatitis, patients with primary brain tumor, patients with respiratory diseases, kidney transplant patients and patients with unexplained etiology. Phylogenetic analysis of the Bulgarian isolates and their assignment to genotype 1.
A study and we established a relationship between the bacteria that cause periodontitis, and high-risk strains of HPV.
- **Investigating the impact of physical factors on the replication and extracellular virions of BHC 1.**

5. Evaluation of teaching activity.

Dr. Kalina Shishkova is an established teacher with proven experience and an already established school of students, virologists. Under her supervision, as part of the team of the Laboratory "Virusology, BF, SU "St. Kliment Ohridski", the main cadres of virologists and molecular biologists in the country graduate. She is the academic supervisor of 7 graduates who successfully completed the Master's degree program and two Bachelor's degree programs.

An impression is made by the huge teaching employment of the candidate, according to the Information on academic employment provided by SU "St. Kliment Ohridski", namely 3,181.5 hours of study time and 1,802.9 hours of classroom engagement. This is nearly 5,000 hours of work with students, graduates and PhD students, determining their future career growth and areas of competence.

6. General assessment of the applicant's compliance with the mandatory requirements of the DASRBA.

According to the provided table with the covered required points by group of indicators from the national criteria for acquiring the academic position "Associate Professor", Kalina Shishkova, PhD fully covers and even surpasses the specified criteria. The required minimum is 400 points, and the candidate collects 468 points. This, in combination with her active teaching and impressive scientific activity, absolutely confirms the suitability of the candidate for the academic position "Associate Professor".

7. Conclusion.

The assessment of the overall career development, research, organizational-methodical and teaching activities of Kalina August Shishkova, Ph.D., shows that the candidate fully meets the criteria of DASRBA and the requirements of the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria of the University of St. Kliment Ohridski" for occupying the academic position of "Associate Professor" in the scientific specialty "Virusology". Her professional path is an example of consistent, purposeful and thorough development in an extremely relevant and promising field of laboratory medicine. My opinion is that Kalina Shishkova, PhD is a built scientist, with a clearly defined profile of scientific interests and original contributions, supported by many years of research and teaching experience in the field of medical virology and molecular biology. She is a household name in the scientific community, a teacher and mentor to generations of students, with potential for future professional development and a number of new scientific developments. All this,

together with the achieved high scientometric indicators, undeniably confirm the academic potential of the candidate.

I am pleased to offer the esteemed jury to choose Kalina August Shishkova, Ph.D., for the academic position "Associate Professor" in "Virusology" at SU "St. Kliment Ohridski".

Data: 02.11.2023 г

Signature:

Associate Professor Stefka Krumova Ivanova, PhD

A handwritten signature in blue ink, appearing to read 'Stefka Krumova Ivanova', is positioned above the printed name of the signatory.