

# STATEMENT

on the competition for the academic position of Associate Professor in the professional field 4.3. Biological Sciences (Virology - Molecular Virology), announced by the Laboratory of Virology, Faculty of Biology, Sofia University "St. Kliment Ohridski" in State Gazette No. 65 of 28.07.2023.

Candidate: Assoc. Prof. Dr. Kalina Avgust Shishkova, Laboratory of Virology, Faculty of Biology, Sofia University

Statement by: Assoc. Prof. Dr. Habil. Lyuben Ivanov Zagorchev, Department of Biochemistry, Faculty of Biology, Sofia University "St Kliment Ohridski", member of the Scientific Jury according to the order RD-38-543/18.09.2023 of the Rector of Sofia University "St. Kliment Ohridski"

## ***General data about the applicant***

In the competition for associate professor in the professional field 4.3 Biological sciences, announced by the Laboratory of Virology, Faculty of Biology, Sofia University there is one candidate - Asist. Prof. Dr. Kalina Avgust Shishkova. All necessary documents have been submitted, on the basis of which the candidate has been admitted to the competition. Dr. Shishkova was born in 1970, graduated from higher education - Master of Molecular Virology at Faculty of Biology, Sofia University in 1997 with an excellent average grade (5.57) and successfully passed the state examination - thesis defense, with a grade Excellent 6.00. After that she worked as a specialist in Virology at the Institute of Microbiology, BAS until 2002. From 2002 to the present moment she successively passed through the positions of Honorary Assistant Professor (until 2004), Assistant Professor (until 2010), Senior Assistant Professor (until 2011) and Principal Assistant Professor of Virology at the Faculty of Biology, Sofia University. In 2014 she defended her dissertation for obtaining PhD on "Distribution and genetic diversity of Torque teno viruses (family Anelloviridae) in Bulgaria", awarded by the Faculty of Biology of Sofia University. In the framework of the dissertation, a significant number (more than 500) of blood samples were examined for the presence of three Torque teno (TTV, TTMV and TTMDV) in the human population by PCR detection and their phylogeny based on sequence analysis. It is evident that the candidate's education and academic growth provide the necessary foundation for advancement in the field of molecular virology.

## ***Teaching experience***

As an assistant professor, Dr. Shishkova has considerable experience in teaching practical classes and teaching practices in Virology, Molecular Virology and Microbiology and Virology for over 20 years. In terms of lecture courses, the candidate has experience in delivering both the general course in Virology for the BSc and specialised courses in the MSc. She has indicated and supervised nine graduate students. The data presented gives an idea of the candidate's teaching experience, which is adequate for the competition, but does not allow a more detailed analysis.

At present, the Laboratory of Virology has on staff one habilitated lecturer and two non-habilitated lecturers, among whom is Asst. Dr. Shishkova. The need for growth of the non-habilitated lecturers and expansion of the team is obvious and I believe that Dr. Shishkova has the necessary experience in terms of teaching. I recommend that Dr. Shishkova's efforts, upon successful habilitation, be directed towards supervising a PhD student and developing new specialized courses for the MSc, but also revising and considering the possibility of a new virology course for the BSc.

### ***Meeting the minimum state requirements for the academic position of Associate Professor***

To hold the academic position of Associate Professor it is necessary to meet points in four groups of indicators. Indicator group A requires 50 points, which are awarded upon successful defence of a PhD thesis, which the candidate proves by a PhD diploma on 23.12.2014. Indicator group B requires 100 points awarded for a monograph or equivalent scientific publications. The candidate shall indicate five scientific publications equivalent to 100 points. Indicator group D requires a minimum of 200 points from scientific publications indexed in Web of Science and/or Scopus, with impact factor or impact rank. The applicant has indicated 15 articles, which together total 258 points. In some of the scientific publications, the applicant appears with his pre-marriage surname, Kostova. Publication number 4 (Antiviral Res., 90 (2): A56.) on the list of publications for the competition for Associate Professor is an abstract from a conference published in an impact factor journal with all the attributes of a scientific publication. Publication number 9 (Acta Microbiologica Bulgarica, 32 (2): 148-149) is of the Letter to Editor type, in a journal of impact rank. My experience so far shows that such publications are recognized as full-fledged publications by NACID and carry the appropriate number of points. Even assuming that this is not the case, a reduction of 25 points (Q1) + 12 points (Q4), or a total of 37 points, would result in a total of 221 points, which exceeds the minimum state requirements. Without making a specific suggestion, I would recommend that the applicant shuffle some of the publications between indicator groups C and D, so that group C (equivalent to a monograph) would include primarily publications in which the applicant is the lead (first) author. Indicator group E requires 50 points from citations that are covered by 30 Scopus citations for a total of 60 points. In conclusion, the data presented by Dr. Shishkova testifies to the full coverage of the minimum state requirements and the regulations of Sofia University for the development of academic staff.

### ***Analysis of publication activity and author contributions***

The candidate participated in the competition with 21 scientific publications, indicating a total of 33 scientific publications, 138 citations and participation in 20 scientific projects. Participation in 48 scientific forums is indicated. All are closely related to the field of the competition - Virology (Molecular Virology). The Scopus reference shows 18 scientific publications, 143 citations and h-index 6. The above activity is evenly distributed over the years of the candidate's academic growth. I consider the above data as satisfying the requirements for the academic position of Associate Professor in the relevant professional field and scientific specialty.

Most of the publications in indexed journals were realized in journals with good reputation and medium to high impact factor, among which Amino acids (IF=3.8), Carbohydrate research (IF=2.0), Phytochemistry Reviews (IF=2.9), Frontiers in Plant Science (IF=6.6), Viruses (IF=5.8). Most of the publications have been realized within an established team of the Laboratory of Virology and in collaboration with other departments of the Faculty of Biology and research institutes in Bulgaria. In about a quarter of them the candidate is the lead author. The contributions are summarized in four main areas - I. Screening of natural products (mainly of plant origin, but also products of lactic acid bacteria) for antiviral activity, II. Screening of new synthetic compounds for antiviral effect, III. Medical virology, IV. Investigation of the antiherpetic action of physical factors. All of them are closely related to the field of the competition - molecular virology. Promising results have been obtained concerning the antiviral effect of natural and synthetic compounds, as well as physical factors - surface-wave gas-discharge plasma. The latter line of work seems particularly interesting and promising.

On the basis of the data presented, I consider the candidate, Dr. Kalina Shishkova, to be an essential participant in the experimental work on the presented publications. Her authorial contribution is undeniable, but she also demonstrates effective work in broad teams of scientists with different competencies, as well as the prospect of developing and establishing her own scientific direction, which will ensure the expansion of the scientific output of the main unit - the Laboratory of Virology and her own career development.

### ***Conclusion***

In conclusion, I believe that Dr. Kalina Shishkova presents an adequate candidacy for the announced competition for associate professor, which satisfies the minimum state requirements under the Law on Academic Staff Development of Sofia University "St. Kliment Ohridski". The candidate is a well-established scientist with practical experience and potential to develop scientifically and experimentally, but also an erudite teacher with experience. I strongly recommend to the Scientific Council of the Faculty of Biology of Sofia University to vote positively for the election of Asst. Dr. Kalina Shishkova for the academic position of Associate Professor in the professional field 4.3 Biological Sciences (Virology - Molecular Virology).

06.11.2023 г.

Sofia / Associate Professor Lyuben Zagorchev/