

OPINION

by

Assoc. Prof. Mariela Todorova Chichova, PhD, Faculty of Biology, Sofia University “St. Kliment Ohridski” – a member of the scientific panel, appointed by the order of the Rector of Sofia University “St. Kliment Ohridski” No. RD 38-661/03.12.2024

on

a competition for holding the academic position “Associate Professor” in the Professional Area 4.3. Biological Sciences (Biophysics), announced in the State Gazette No. 88/18.10.2024, for the needs of the Faculty of Physics, Sofia University “St. Kliment Ohridski”

The competition for holding the academic position “Associate Professor” in the Field of Study in Higher Education 4. Natural Sciences, Mathematics and Computing, Professional Area 4.3. Biological Sciences (Biophysics) is announced for the needs of the Faculty of Physics, Sofia University “St. Kliment Ohridski” in the State Gazette No. 88/18.10.2024. Documents of one candidate – Ch. Ass. Prof. ELITSA LYUBOMIROVA PAVLOVA, PhD, have been submitted within the period regulated by the law. Currently, she works on a permanent employment contract at the Department of Optics and Spectroscopy, Faculty of Physics, SU “St. Kliment Ohridski”.

1. GENERAL INFORMATION ABOUT THE CANDIDATE

1.1. EDUCATION

The candidate Elitsa Pavlova is a graduate of the Faculty of Biology, Sofia University “St. Kliment Ohridski”, where she obtained a master's degree in Biology with a specialization in Cell Biology and Developmental Biology in 2001, and a second master's degree in Biology and Chemistry in 2002. She was awarded PhD degree in the scientific speciality 01.06.17 “Animal and Human Physiology” in 2007 after successfully preparing and defending a doctoral dissertation on the topic “Assessment of biomarkers of oxidative stress”. During the period 2002-2024 she participated in a number of training programs, courses and specializations such as European School in Medical Physics, NATO ASI International Summer School in Biophotonics, Physics Without Borders, etc.

1.2. PROFESSIONAL CAREER

Elitsa Pavlova held the position of chemist in the Faculty of Physics, Sofia University “St. Kliment Ohridski” from October 2005 to July 2007 where she subsequently continued her career, successively passing through the positions of Assistant Professor (from August 2007 to November

2007) and Senior Assistant Professor (from November 2007 to March 2011). She has currently held the position of Chief Assistant Professor since April 2011.

During her education and professional development Ch. Ass. Prof. Elitsa Pavlova has acquired skills and experience in both research and teaching activities. The professional realization of the candidate is thematically related to the current competition.

1.3. TEACHING ACTIVITY

The general and auditorium classes of Ch. Assistant Prof. Pavlova significantly exceeded the required minimum workload during the last 5 academic years (2019/2020-2023/2024) – average annual total workload 546.18 hours, of which 507.3 auditorium hours. According to the attached references, she was the academic supervisor or adviser of master and bachelor theses of 15 students at the Faculty of Physics and 2 at the Faculty of Chemistry and Pharmacy during the period 2009-2022.

2. EVALUATION OF THE MATERIALS PROVIDED FOR PARTICIPATION IN THE COMPETITION

2.1. RESEARCH ACTIVITY

According to the presented documents, the general scientific output of Ch. Assistant Prof. Pavlova includes 39 scientific works, of which 28 articles in scientific journals, 2 book chapters, 3 articles in series and 6 proceedings papers (from conferences, etc.). Her scientific work has a total IF of 49.61 and an *h*-index (Scopus) of 6. The reference in Scopus at the time of documents evaluation has shown 157 citations excluding self-citations.

In the current competition for the academic position “Associate Professor”, 20 scientific papers are presented, distributed by quartiles as follows: Q1 – 6; Q2 – 7; Q3 – 3; Q4 – 1; in journals with SJR, without IF – 3; total IF of 41.609; *h*-index (Scopus) of 5. Ch. Ass. Prof. Pavlova is the major (first or last) author in 10 of the articles presented for the competition.

2.2. COMPLIANCE WITH THE MINIMUM NATIONAL REQUIREMENTS FOR HOLDING THE ACADEMIC POSITION “ASSOCIATE PROFESSOR”

The reference on the compliance with the minimum national requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) for Field of Study in Higher Education 4. Natural sciences, mathematics and informatics, Professional Area 4.3. Biological Sciences, shows the following quantitative indicators:

Indicator group	Indicator	Minimum required points	Points of the candidate
A	Dissertation work for the award of PhD degree	50	50
B	Habilitation work – scientific publications in editions referenced and indexed in databases with scientific information (Web of Science and Scopus)	100	1 publ. Q1 (25 p.) – B1 3 publ. Q2 (20 p.) – B4, B5, B7 1 publ. Q4 (12 p.) – B6 2 publ. in editions with SJR without IF (10 p.) – B2, B3 Total 117
G	Scientific publications in editions referenced and indexed in databases with scientific information (Web of Science and Scopus) beyond the habilitation work	200	5 publ. Q1 (25 p.) – G7, G 10, G11, G12, G13 4 publ. Q2 (20 p.) – G1, G4, G6, G8 3 publ. Q3 (15 p.) – G3, G5, G9 1 publ. in editions with SJR without IF (10 p.) – G2 Total 260
D	Citations in scientific journals, monographs, collective volumes, and patents referenced and indexed in databases with scientific information (Web of Science и Scopus)	50	157 citations excluding self-citations (Scopus) Total 314

The presented scientific metric data completely fulfil the minimum national requirements of the LDASRB for holding the academic position "Associate Professor" at Sofia University "St. Kliment Ohridski", and according to indicators G and D they significantly exceed them.

2.3. MAIN SCIENTIFIC CONTRIBUTIONS

The main scientific contributions of the candidate are focused on the evaluation of pro- and antioxidant activity of plant extracts, chemical compounds and medicinal substances for prevention and treatment of diseases such as influenza and breast cancer by using *ex vivo*, *in vitro* and *in vivo* models [B1, B4, B6, G1, G7], as well as on studying the pro- and antioxidant activity of basic markers of oxidative stress and elucidating the mechanisms of damage in patients with COVID [G6]. Study of the biological activity of newly synthesized nanomaterials and evaluation of their antimicrobial effects [B5, B7, G3, G4, G5, G8, G10, G11, G12, G13] is another substantial area in the candidate's scientific activity. In addition, the candidate presents her applied studies related to the development of new biosensor systems for use in clinical practice [B2, B3, G2] and the implementation of a new

for Bulgaria modified ATP-test as part of the routine quality control in the production of BCG vaccine [G9].

3. CRITICAL NOTES AND RECOMMENDATIONS

The information in the provided reference from the Database on the scientific activity of Sofia University “St. Kliment Ohridski” – Authors, has not been updated and is incomplete, which leads to inaccurate scientific metric indicators for some of the articles.

Specific disciplines in which the candidate is engaged with lectures and/or practical exercises have not been indicated.

The submission of documents in competitions for acquiring academic positions at Sofia University demands the candidates to thoroughly familiarize themselves with the requirements of the LDASRB, the Regulations for its implementation and the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski”. The materials provided in the current competition were not sufficiently comprehensible, which significantly hindered their assessment.

CONCLUSION

The comprehensive assessment of the materials submitted for the current competition shows that all formal requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Rules for its implementation and the Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University “St. Kliment Ohridski” have been fulfilled. In terms of volume, content and quality, the scientific output of the candidate, as well as her educational and teaching activity, meet and even exceed the minimum national requirements for acquiring the academic position “Associate Professor”. This gives me reason to express my positive opinion on the candidacy of Ch. Assistant Prof. Elitsa Lubomirova Pavlova for the academic position “Associate Professor” in Professional Area 4.3. Biological Sciences (Biophysics).

12.02.2025 г.

Signature:

/Assoc. Prof. Mariela Chichova, PhD/