

Statement

In a competition for the academic position of "Associate Professor", professional field 4.1. Physical Sciences (Biophysics and Medical Physics), announced in State Newspaper, issue 99 of November 20, 2020, for the needs of the Department of Physics, Biophysics and Radiology, Faculty of Medicine, Sofia University "St. Kliment Ohridski ", Sofia with candidate Dr. Desislava Henri Lazarova

Reviewer: Iana Hristova Tsoneva, DSci, Professor at the Institute of Biophysics and Biomedical Engineering, BAS, Sofia

The scientific jury at its first meeting on 25. 01. 2021, after preliminary acquaintance with the materials of the competition, considered and unanimously decided that scientometric data of Dr. Lazarova meet the minimum national requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADAS RB). She is the only candidate in the announced competition. Since 2008 she has been an assistant in the above-mentioned department. In 2019 she obtained a certificate for a recognized specialty in biophysics, issued by Sofia University "St. Kl. Ohridski ", Sofia.

Dr. Lazarova defended her dissertation in 2019 on "Contrast-enhanced magnetic resonance techniques for visualization of pathologies associated with disorders of cellular redox status" - professional field 4.1 Physical sciences, scientific specialty Biophysics, Faculty of Physics, Sofia University "St. Kliment Ohridski".

Analysis of the distribution of works by points, according to the minimum national requirements of the Regulations to ADAS RB: The works included in group C (with the nature of habilitation work) are five (100 points) and are published mainly in Anticancer Res. with IF-1.9. The publications (20 in total) in section D (outside the habilitation thesis) bring her 261 points. The minimum number of points required by the law is 200. The works with the participation of Dr. Lazarova have been cited a total of 144 times by foreign authors. 107 citations are included for the competition under this procedure (214 points if 50 - group E required by law). For AD "Associate Professor" no points are required regarding participation or project management, but the applicant has indicated participation in projects - a total of 16 and project management for human resources - (a total of 150 points). According to some of the paragraphs, Dr. Lazarova exceeds the national indicators for AD "Associate Professor".

The candidate has participated with 23 oral and poster presentations at local and international events.

Teaching activity: Dr. Lazarova from 2015 to 2020 has for each school year about 600 hours of classroom employment and about 100 hours of extracurricular engagements. Her participation in projects such as: BG05M20P001-2.002-0001 of the Ministry of Education and Science "Student Internships", coordinator of project BG051PO001-3.3.06-0040 "Building interdisciplinary teams of young researchers in the field of basic and applied research of importance for medical practice " under the Operational Program " Human Resources Development" and membership in 13 projects with the participation of students, doctoral students and young scientists also refers to the teaching work.

Administrative organizational experience: Dr. Lazarova is Secretary of the Faculty Council, member of the General Assembly of Sofia University "St. Kliment Ohridski", authorized person for the Medical Faculty for NACID, overall organization and conducting of the practical classes in Biophysics and others. The activities in the last paragraph do not bring points for docent career, but contribute to the development of managerial and business qualities of scientists.

Dr. Lazarova's **contributions** reflect 20 publications in peer-reviewed and indexed journals and 1 in non-peer-reviewed journal with scientific referencing. I believe that works included in the dissertation for scientific-educational degree "Doctor" (a total of 6, which are outside the above articles) are not included in the scientometrics for academic position "Associate Professor".

The contributions from papers equivalent to research in a monographic paper (papers 3, 4, 6, 8 and 15 from group B) have an original character and are of the type: Obtaining and proving new facts for science.

The articles submitted in the competition (outside the habilitation work - group D) are 20, of which 4 publications in category Q1, 4 in Q2 and only these 8 works speak of a serious presence in highly impact journals. 7 contributions are indicated (group I from the general list of publications) refer to the field of obtaining and proving new facts for science, as well as to the department - proving with new means of an existing problem.

Contributions by points: 1. Modulation of redox status and increase of sensitivity of tumor cells to conventional chemotherapeutics, reflected in 5 points, 2. Nitroxide-enhanced EPR for visualization and assessment of cellular redox status, 3. Optical image, 4. Contrast multimodal samples, 5. Algorithm for image processing for extraction of contrast-enhanced signals from MRT (papers 1-8, 12). These results could also be of practical importance for the development of new protocols for therapy in oncology.

Contributions from the same section number 6. Abiotic stress in plants and reactive oxygen species and 7. Mechanisms of resistance to extreme drought of the resurrected plant *Haberlea rhodopensis* (papers 11, 15-16, 18-20, 26 and 29) summarize the results, related to fundamental research concerning the inactivation of the photosynthetic apparatus under abiotic stress and the role of reactive oxygen species, as well as biophysical research with the endemic Bulgarian "resurrected" plant *Haberlea rhodopensis*.

I generally accept the contributions. They are important for science and practice and reflect the work of the candidate in the competition.

Conclusion: After a comprehensive analysis of the scientific production of the candidate, her academic and professional work (publications and citations, reports at international forums), leader and participant in research teams and projects, teaching experience, I find that Dr. Lazarova meets and exceeds all requirements in the Regulations to ADAS RB, for the conditions and the order of holding the academic position "associate professor". The materials presented in the competition, the contributions and my personal impressions of Dr. Desislava Lazarova give me reason to give a positive assessment of the candidate and to recommend the Scientific Jury to prepare a proposal to the Faculty Council of the Medical Faculty at Sofia University "St. Kl. Ohridski" for her election to the academic position of "Associate Professor" in the professional field 4.1 "Physical Sciences" (Biophysics and Medical Physics).

February 15, 2021

Signature:

Prof. Iana Tsoneva