

SHORT REVIEW

On: Competition for the occupation of the academic position "Associate Professor" in the Area of Higher Education 4. Natural Sciences, Mathematics and Informatics, Professional Field 4.1. Physical Sciences, Scientific specialty "Biophysics and Medical Physics", announced by Sofia University "St. Kliment Ohridski", in the State Gazette, number 99/20.11.2020

by Prof. Tsvetanka Tsankova Marinova, MD, PhD, DMSc, Faculty of Medicine of Sofia University "St. Kliment Ohridski" and "Lozenets" University Hospital

Information on the competition procedure

The competition for the occupation of the academic position "Associate Professor" in the professional field 4.1. Physical Sciences (Biophysics and Medical Physics) is announced for the needs of the Department "Physics, Biophysics and Radiology" in the Medical Faculty of Sofia University "St. Kliment Ohridski". The competition announcement was published in the State Gazette, number 99/20.11.2020. The composition of the Scientific Jury was determined by an Order of the Rector No. RD 38-28 of 18.01.2021 on the grounds of a decision of the Faculty Council of the Faculty of Medicine (Protocol No. 84/13.01.2021).

One candidate participates in the competition: Assistant Dessislava Anri Lazarova, PhD. The regulatory requirements for the competition procedure have been met.

The short review was prepared in accordance with the Law on Development of Academic Staff in the Republic of Bulgaria (LDASRB), the Rules for the Implementation of the LDASRB and Section IV (Terms and Conditions for Occupation of the Academic Position "Associate Professor") of the Rules for the Conditions and Procedure for Acquiring Degrees and Occupation of Academic Positions at Sofia University "St. Kliment Ohridski".

The applicant's documents are in compliance with the regulative requirements for admission and participation in the competition for the occupation of the academic position

“Associate Professor” at Sofia University “St. Kliment Ohridski“. They are presented in sequence from No. 1 to No. 18 and include supporting evidence: Curriculum Vitae; Higher education diploma; Diploma for educational and scientific degree “Doctor”; Diploma for medical specialty in Biophysics; Document for academic position; Certificate for work experience in the specialty; Documents proving the fulfilment of the requirements under art. 105, para 1, item 2 (Attachments concerning the teaching activities); List of publications, inventions and other applied research results: a) list of all publications, b) list of publications submitted for participation in the competition; List of system “Authors”; Reference according to the form for meeting the national minimum requirements for the relevant scientific area and the additional requirements of Sofia University “St. Kliment Ohridski” with evidence; Reference to original scientific contributions; Reference of citations; Reference to the indicators under art. 112, para 2; Scientific papers submitted for participation in the competition; Copy of the announcement in the State Gazette.

Applicant's curriculum vitae and academic development

Dessislava Anri Lazarova was born in 1981 in Sofia. She obtained a Master degree in Molecular Biology – Biophysics at the Faculty of Biology, Sofia University “St. Kliment Ohridski“ (Diploma Reg. No. M 180097 of March 11, 2006). She completed her secondary and higher education with excellent grades. In 2019 she acquired a medical specialty in Biophysics (Diploma SU No. 000139, Reg. No. 023184 of September 10, 2019). She was awarded the educational and scientific degree “Doctor” in 4.1. Physical Sciences (Biophysics) in 2019 (Diploma No. SU 2019-63 of May 10, 2019). Dessislava Anri Lazarova works as an assistant in the Department “Physics, Biophysics and Radiology” at the Medical Faculty at Sofia University “St. Kliment Ohridski” from 05.11.2008. She has been teaching biophysics and physics to medical students for more than 12 years. During this period she participated in more than 10 different administrative and organizational activities in the department and the faculty. Dr. Lazarova has

specialized abroad - National Institute for Radiological Research (NIRS), Chiba, Japan. She is a member of two scientific associations and organizations.

Scientific research and scientometric data

The applicant's scientometric data, evaluated in their wholeness, are in compliance with the criteria and indicators recommended in the regulations for evaluation by the Scientific Jury at conducting a competition for “Associate Professor”. The scientific papers submitted for review are from the area of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.1. Physical Sciences, scientific specialty “Biophysics and Medical Physics”.

Dr. Lazarova is the author and co-author of published and reported scientific papers with indisputable scientifically applied and very significant contributory character in the field of biophysics and experimental imaging diagnostics. The dissertation work of the applicant for the awarding of the academic and educational degree “Doctor” entitled: “Contrast-enhanced magnetic resonance techniques for visualizing pathologies associated with cellular redox status disorders” (Sofia, 2019). Supervisors are Prof. Rumyana Bakalova, PhD, DSc and Assoc. Prof. Genoveva Zlateva, PhD. The experimental research of the dissertation was conducted at the NIRS in Chiba, Japan. The number of published scientific papers is 31 (6 of them are related to the PhD Dissertation): 24 of them being internationally referenced and indexed in the international databases *Scopus* and *Web of Science* of journals with IF 7 in peer-reviewed journals. The participations in scientific forums are 23 participations in scientific forums abroad and in national scientific forums. Participation in research projects – 16 projects, including as coordinator and beneficiary in two of them. According to the information provided 144 citations are found in the *Scopus* and *Web of Science* databases. The IF value related to the publications of Dr. Lazarova (excluding those related to the dissertation) is: overall IF – 41.68, and personal IF – 6.86; H-index is 6 (according to *Scopus*).

The most significant contributions from the scientific work of Dr. Lazarova are detailed in the enclosed documents of the competition “Author's reference to the

contribution nature of scientific works". They have theoretical, methodological and scientific-applied medico-biological character and concern mainly the following areas: Development of new contrast-enhanced magnetic resonance methods and approaches for the visualization of pathologies related to the oxidative-reductional balance of the cells; Abiotic stress in plants and possibilities for its modulation; Applications of high sensitivity techniques such as magnetic resonance imaging (MRI) and electronic paramagnetic resonance imaging (EPR) in original experimental models and in different *in vivo* and *in vitro* conditions. They contribute to the early diagnosis and prediction of the therapeutic effect in diseases accompanied by a disturbance of redox-signaling in the body in oncological, nephrological, neurodegenerative, autoimmune and other diseases.

Dr. Lazarova is registered in the Register for Scientific Activity at the NACID. The comparative analysis made of the minimum national requirements under Art. 2b from LDASRB for the Area of Higher Education 4. Natural Sciences, Mathematics and Informatics, Professional Field 4.1. Physical Sciences with the attached reference to the real points of the applicant shows that Dr. Lazarova meets the minimum national requirements for occupying the academic position of Associate Professor. The detailed analysis of the relevant groups of indicators A/A, B/Б, C/B, D/Г, E/Д, F/E of Dr. Lazarova proves the following: Indicators A and C meet the national requirements, indicator D is 261 points at a minimum requirement of 200. Indicator E is 214 points at a minimum requirement of 50. Indicator F is 150 points with a minimum required value of 0. The total number of points of Dr. Lazarova is 775 with the minimum number as a national requirement for the academic position of "Associate Professor" being 400 points. By group of indicators (D, E and F), Dr. Lazarova's values exceed the national minimum requirements.

Teaching and lecturing activities

Dr. Lazarova has significant experience in teaching Biophysics and Medical Physics to students for the educational qualification degree Master, specialty Medicine. The reference for the educational employment of assistant Lazarova shows that her

classroom annual educational employment is over 600 hours, and the total annual educational employment is over 700 hours.

Conclusion

Assistant Dessislava Anri Lazarova, PhD, participating in the competition for the occupation of the academic position "Associate Professor", is a highly qualified and erudite specialist, hardworking, creative and established researcher with significant scientific work and original contributions in the field of the biophysics and experimental imaging diagnostics. Her research work is very intense and effective. She shows consistency, perseverance, discipline, competence and precision in all aspects of her research and teaching activities.

Dr. Lazarova's scientometric data are not only in compliance with, but also exceed the national minimum requirements, the regulative criteria and indicators for the evaluation of the candidates in conducting a competition for the academic position "Associate Professor".

In general, the original scientific results obtained by Dessislava Lazarova have an indisputable fundamental, methodological and scientifically applied contribution in the medical-biological aspect with possibilities for application in medical practice.

The complex evaluation of her documents gives me ground for a positive opinion. Therefore, with complete conviction, I propose to the honourable members of the Scientific Jury to decide on the election of assistant Dessislava Anri Lazarova, doctor on 4.1. Physical Sciences (Biophysics) for "Associate Professor" in professional field 4.1. Physical Sciences (Biophysics and Medical Physics) and occupation of this academic position at the Faculty of Medicine of Sofia University "St. Kliment Ohridski".

February 12, 2021

Sofia

A member of the Scientific Jury:

(Prof. Ts. Marinova, MD, PhD, DMSc)