

# OPINION STATEMENT

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Chairman of a scientific jury entered in the Register of Sofia University, № 19/23.09.2021

Subject: Competition for the academic position "**Professor**" in the field of higher education 4. Natural sciences, mathematics, and informatics, Professional field 4.3 Biological sciences (Biochemistry), announced in the State Newspaper issue 63/30.07.2021 (correction in SN issue 65/06.08.2021), with candidate Assoc. Prof. Albena Georgieva Jordanova, Ph.D.

The formation of the assessment for the final opinion statement is based on the minimum national requirements of the Law for the Development of Academic Staff in the Republic of Bulgaria and the Regulations on the terms and conditions for acquiring scientific degrees and holding academic positions at the Sofia University "St. Kliment Ohridski".

## 1. General Information about the Candidate

Albena Georgieva Jordanova was born on September 14, 1968 in the town of Radomir. She graduated from the National High School of Natural Sciences and Mathematics "Acad. Lyubomir Chakalov" in the city of Sofia in 1986 and the Faculty of Biology of Sofia University "St. Kliment Ohridski", specialty "Biochemistry and Microbiology" (master degree), with specialization "Biochemistry" in 1992. From 1995 to 1997 she worked as a biologist-specialist in the Department of Biochemistry of the Bulgarian Academy of Sciences (BAS), and from 1997 to 2012. she is a senior assistant in the section "Lipid-protein interactions in biological membranes", Institute of Biophysics and Biomedical Engineering, BAS. In 2007 she obtained Ph.D. in the scientific specialty Biophysics (01.06.08). I have known Dr. Jordanova since 2012 when she won a competition for associate professor of biochemistry at the Medical Faculty of Sofia University and started working in the Department of Chemistry and Biochemistry, Physiology and Pathophysiology (CBPhP). Assoc. Prof. Albena Jordanova still works in the same department and is currently its head. Assoc. Prof. Jordanova has excellent teamwork skills, speaks Russian and English, and has very good computer literacy. She has been a member of the board of the Association of Olympic Teams in Natural Sciences since 2010, organizer of the First and Second National Olympic Conferences in Natural Sciences and Innovation in 2014 and 2016, and organizer of 10 winter and summer biology schools since 08.2014 until 01.2019 with a total of about 500 outstanding students, participants in the National Olympiads in Biology and Health Education. She was a member of the jury in the National Competition for Young Talents of

the Ministry of Education and Science for the period 2015-2019, a member of the jury "Talented Biologist" in 2018, 2019, and 2021, a member of the jury of the national festival "Science on Stage" in the 2021 year, assessor of the exam papers from the state matriculation exams in biology and health education for the period 2018-2021, academic mentor of students under the project "Student Internships" for 2016-2018. As a colleague of Assoc. Prof. Albena Jordanova, my personal impressions are that she is very dynamic, responsible, and with broad general knowledge, as evidenced by the 48 popular science articles published in HiComm magazine (2006-2009). In addition to always being smiling and friendly, she is strict about her duties and motivated in her work, which earns the respect of colleagues, students, and pupils.

## **2. General description of the submitted materials in the competition**

For the current competition, the candidate submits one monograph, 28 scientific publications, 13 teaching aids, participation in 28 scientific projects (supervisor of 10), and a list of 266 citations. Official notes are presented, certifying that Assoc. Prof. Jordanova is titular of courses at the Medical Faculty of Sofia University for students majoring in Medicine, Medicine in English, and Nurse. Jury membership, scientific guidance of a graduate and a part-time doctoral student are also attached.

## **3. Scientific research activity**

The scientific production of Assoc. Prof. Dr. Albena Jordanova is quite prolific – one monograph, 95 scientific publications, 35 of which are in scientific journals with quartiles, and 32 of them with an impact factor. Her total number of citations is 266 and she has participated in 157 scientific events. Her research activity is in the field of research of the molecular mechanisms of interaction in model membranes, lipid polymorphism, testing of pulmonary maturity of premature newborns, biochemical and biophysical methods for the analysis of clinical samples in lung pathologies. She has been a reviewer and author of opinion statements as a jury member of 10 dissertations, an internal jury member in 5 public competitions for “Principal assistant” and an external member of a jury in 9 public competitions for “Principal assistant” and 1 competition for academic position “Associate professor”.

The monograph presented by Assoc. Prof. Jordanova “Alveolar surfactant – metabolism in norm and pathology. *In vitro* methods for assessment of its functional state”, University Publishing House " St. Kliment Ohridski ", Sofia 2021, 178 pages, ISBN 978-954-07-5294-5, has scientific editor and scientific reviewers. The monograph is divided into two parts: 1. synthesis, composition, and properties of the alveolar surfactant; 2. *in vitro* model systems for the examination of the components of the alveolar surfactant and describes in detail the composition, properties and molecular mechanisms of interaction of the components of the alveolar surfactant in norm and pathology. The book skillfully combines modern knowledge about the alveolar surfactant with the author's original research on the subject. Assoc. Prof. Jordanova's extensive experience in laboratory research is reflected in the detailed presentation of modern *in vitro* methods for testing the concentration and establishing the

individual components of the alveolar surfactant in clinical trials of patients. The book is richly illustrated with mostly author's results and its main contribution in addition to comprehensive information on the metabolism of surfactant components in norm and pathology, is the emphasis on the practical orientation of the described informative laboratory methods, which is important for its relevance as a modern guide to biochemistry, neonatology, and pediatrics and will be useful both in the training of medical students and in the clinical practice of neonatologists and pulmonologists. According to the minimum national requirements of Law for the Development of Academic Staff in the Republic of Bulgaria, group of indicators B, the monograph brings 100 points to the candidate.

A list of 28 publications was provided to the current competition. 12 of them are referenced and indexed in academic research databases (Web of Science and Scopus). 3 articles are with Q1, 4 articles with Q2, 3 articles with Q3, and 2 articles with Q4, or a total of **224** points on indicator D (with a minimum of 200).

After reviewing the titles from the list of publications and the attached summaries, I believe that the scientific work and scientific-applied contributions of Assoc. Prof. Albena Jordanova are entirely in the specialty "Biochemistry" and correspond to the theme of the competition. They cover the following scientific-applied and methodological directions:

- analysis of the structure and properties of the alveolar surfactant in normal and pathology;
- examination of clinical samples from patients to assess the functional state of the lungs in various diseases;
- study of intermolecular interactions in model biological membranes through modern highly informative laboratory methods;
- optimizing the teaching of biochemistry at the Medical Faculty of Sofia University by introducing new experiments and reviewing and discussing clinical cases;
- increasing the knowledge and skills of the Olympians in biology by creating modern tests, developing logical thinking, and solving complex scientific problems.

According to Group of indicators E (minimum required points: 100) on citations in scientific journals, monographs, collective volumes, and patents, referenced and indexed in world-famous databases with scientific information (Web of Science and Scopus), Assoc. Prof. Jordanova presented **202** citations, which give her a total of **404** points. According to Group of indicators F (minimum required points: 150), the candidate has a total of **184.67** points for participation in 10 national research projects, principal investigator of one project with attracted BGN 120,000 and issued 13 teaching aids.

Assoc. Prof. Albena Jordanova has been a member of the Union of Scientists in Bulgaria since 2005 and a member of the Association of Biochemists in Bulgaria since 2019.

#### **4. Educational and teaching activities**

Assoc. Prof. Dr. Albena Jordanova is the titular of the compulsory course "Biochemistry" for students majoring in "Medicine", "Medicine in English" and "Nurse". She is also the titular of three elective courses: "Peculiarities of normal metabolism and pathology" and "Phytoproducts and their application in medicine" for the specialty "Medicine" and "Medicine

in English" and "Clinical Laboratory, Biochemistry, and Immunology" for the specialty "Nurse". According to the reference for study employment for the period 2015 - 2020, the applicant has an average of about 700 hours of classroom employment and 890 hours of total employment at the Medical Faculty, Department of CBPhP.

From 2002 to 2013 Assoc. Prof. Jordanova was a part-time lecturer for conducting practical exercises in Biochemistry at the Department of Biochemistry, Faculty of Biology of Sofia University for full-time and part-time students majoring in Molecular Biology, Biotechnology, Biology. "Ecology and protection of the natural environment", "Biology and Chemistry", "Biology and Geography", as well as bachelor's and master's students from the Faculty of Physics at Sofia University, specialties "Medical Physics" and "Optometry".

## CONCLUSION

The scientometric indicators of Assoc. Prof. Dr. Albena Georgieva Jordanova for the current competition, summarized in the table below, exceed the requirements of the Law for the Development of Academic Staff in the Republic of Bulgaria, and the Regulations for the terms and conditions for acquiring scientific degrees and holding academic positions at Sofia University "St. Kliment Ohridski".

Group of indicators Contents	National requirements	Fulfilled
A Indicator 1	50	50
B Indicator 2	-	-
C Indicator s 3 and 4	100	100
D Sum of indicators from 5 to 9	200	224
E Sum of indicators from 10 to 12	100	404
F Sum of indicators from 13 to the end	150	184,67
<b>TOTAL POINTS</b>	<b>600</b>	<b>962,67</b>

In view of the above facts, I support without any hesitation the election of Assoc. Prof. Dr. Albena Georgieva Jordanova and recommend the members of the esteemed Scientific Jury to vote POSITIVE for her to be elected to the academic position of "Professor" in the professional field 4.3 Biological Sciences (Biochemistry).

11 November 2021

Sofia

*Prof. Elena Dzhambazova, PhD*