

STATEMENT

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IN REGARD TO: fulfilling the academic position "PROFESSOR" in the field of higher education 7. Healthcare and sports, professional area 7.1. "Medicine", scientific major "Pathophysiology" at the Faculty of Medicine, University "Prof. Dr. Asen Zlatarov" – Burgas.

I. PROCEDURAL ISSUES

On the basis of Art. 4 (3), (4) of ADASRB (Act for the Development of the Academic Staff in the Republic Bulgaria), by Order no. RD 9 from 20 January 2021 of the Rector of University "Prof. Dr. Asen Zlatarov" – Burgas, and a decision of the Chairman of the Scientific Jury, I have been appointed to present a statement in connection with a competition for the fulfillment of the academic position "PROFESSOR" in Pathophysiology.

In the competition, announced in the State Gazette, issue 105 from 11 December 2020, the only candidate is Prof. Dr. Ganka Yordanova Bekyarova, PhD.

Prof. Dr. Ganka Yordanova Bekyarova, PhD, has presented all the necessary documents in accordance with the requirements of the Act for the Development of the Academic Staff and the Rules of FM of the University "Prof. Dr. Asen Zlatarov", Burgas.

II. PROFESSIONAL EXPERIENCE AND SKILLS

Prof. Dr. Ganka Yordanova Bekyarova was born on July 24, 1952 in the town of Kotel. In 1977, she graduated from the Medical Academy – Sofia. During the period 1977-1980, she worked as an intern at the First Polyclinic – Dobrich. The successive growth in her career included the following positions at the Department of Pathophysiology at the Higher Medical Institute – Varna: Assistant (1980-1984), Senior Assistant (1984-1989), Chief Assistant (1989-1999), Associate Professor (1999-2016), and Professor (2016). In 1984, she acquired a degree in Pathophysiology. With a diploma no. 202301 from 26 June, 1990, she acquired the educational and scientific degree "Doctor" after defending a dissertation on the topic: **"Changes in the Functional Properties of Erythrocytes Associated with Free Radical Oxidation in Thermal Trauma"** in the scientific field of Pathophysiology. Prof. Bekyarova

successfully defended the scientific degree "Doctor of Science", with diploma no. 076 from 19 December, 2014, on the topic: "**Study of Some Possible Mechanisms of Liver Damage Associated with Oxidative Stress under the Conditions of Experimental Thermal Trauma and The Role of Melatonin in Hepatoprotection**".

III. SCIENTIFIC ACTIVITY - PUBLICATIONS

1. Publication Activity (Real Posts)

For the competition, Prof. Bekyarova presents a scientific production, which includes 50 scientific papers, and the list includes **articles and papers only from her publishing activity after becoming an Associate Professor**. According to Art. 26 of ZRASRB and PRAS of the University "Prof. Dr. Asen Zlatarov" – Burgas, the publications are presented as:

1. Publications and reports referred to in a global database with scientific information – 22.
2. Publications and reports in non-peer-reviewed journals with scientific review or published in edited collective volumes – 28.

These include 10 articles with Impact Factor (IF)=10.867. Prof. Bekyarova is a leading researcher (first author) in 12 of the publications in peer-reviewed and indexed in world databases scientific journals, and in 19 of the non-peer-reviewed journals. She was a first author in 62% of all publications. According to Google Scholar, her H-index is 11. She is also the author of two dissertations and one monograph, and she has taken part in the writing of nine textbooks and teaching aids.

The total number of scientific papers is 84, which include participation in scientific forums. The total Impact Factor of publications and abstracts is $IF = 26.254$.

1. Citations

Prof. Bekyarova participates in the competition for the position of "PROFESSOR" with 50 original articles published in local and foreign periodicals, and 50 participations in national and international congresses and conferences. The total number of citations or reviews in scientific journals, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes (WOS/Scopus), is 191. The number of citations in other journals is 50.

2. Key Scientific Contributions

The author's reference of Prof. Dr. Bekyarova shows that most of the scientific contributions are original and innovative. Her scientific production is focused on the following main directions:

I. The first direction, including 18 scientific papers, is related to the study of the **cellular-molecular mechanisms of damage in experimental thermal trauma and the effect of melatonin**. She used a scientifically substantiated experimental model of studying the pathobiochemical and pathophysiological mechanisms of liver damage caused by thermal trauma. Prof. Dr. Bekyarova examined the balance between pro- and anti-oxidants, pro- and anti-inflammatory, and pro- and anti-apoptotic factors, the expression of some transcription factors, pathomorphological changes in the liver, and markers of liver dysfunction. The effect of melatonin on markers of oxidative stress, inflammation, and apoptosis has also been studied.

II. The second direction is **focused on clarifying the pathophysiology of cellular damage under oxidative stress and the protective effect of antioxidants and probiotics**. Studies in this area (21 publications) have proven the effect of melatonin as a redox – a modulator that activates the enzyme heme-oxygenase-1, increases the antioxidant protection, and reduces the oxidative tissue damage and apoptosis in the gastric mucosa during thermal trauma. Tissue heme-oxygenase-1 has been shown to increase brain and lung activity in hypobaria under conditions of oxidative stress. The antioxidant activity of the probiotic "Biomilk" was studied and its protective effect was proven in a model of liver damage. Scientific evidence of the probiotic Biostim LBC and Biostim LBC Panax in ethanol-induced ulcerogenesis has been presented.

III. The third scientific direction includes 9 publications that are related to **experimental studies in metabolic syndrome**. The main pathophysiological mechanisms of non-alcoholic fatty liver in chronic fructose exercise have been studied. The key role of oxidative stress and low-grade inflammation in progressive liver damage in nonalcoholic fatty liver disease has also been demonstrated. The hepatoprotective effect of S-Adenosyl methionine (SAM-e) on fructose-induced liver damage has been established. The protective effect of SAM-e on metabolic and memory disorders in an experimental metabolic syndrome induced by a high-fructose diet has been demonstrated.

IV. The last direction is related to the **modern approaches in teaching Pathophysiology** at MU-Varna. Two publications have been dedicated to that. Each presents an overview and an analysis of the results of her own research, which show an advantage of the problem-based teaching in Pathophysiology over the traditional method of teaching.

Prof. Bekyarova is the author of a monograph on the topic: "Endothelial Dysfunction, Oxidative Stress and Cardiometabolic Disorders", which was published in 2015 by MU-Varna. In this paper, she analyzes the role of oxidative stress in the development of endothelial dysfunction in socially significant diseases such as hypertension, diabetes, metabolic syndrome, and obstructive sleep apnea.

IV. SCIENTIFIC ACTIVITY

1. Participations in Scientific Forums

Prof. Bekyarova shows a very high scientific activity, which is evident from the attached list of 50 participations in national and international congresses and conferences, of which 12 (24%) are abroad. Three abstracts from international forums were published in journals with IF = 15.393.

2. Participation in Scientific and Research Projects at Home and Abroad

Prof. Bekyarova is the leader of two projects funded by the Science Fund of MU-Varna and is a participant in a project on the topic of: "Increasing the Scientific Potential and Opportunities for Career Development in the Field of Medicine, Healthcare, and Biotechnology", no. BG051PO001-3.3.- 06-0028 under Operational Program "Human Resources Development". In the latter, she leads two PhD students.

3. Membership in Scientific Bodies and Companies

Prof. Bekyarova is a member of the Union of Scientists in Bulgaria – Varna Branch, the Bulgarian Physiological Society, the European Physiological Society (FEPS), and the Bulgarian Medical Union.

She is a member of the editorial boards of the Journal of Biomedical & Clinical Research, Oxidants and Antioxidants in Medical Science, and Scientific Journal.

V. PARTICIPATION IN PREPARATION OF SPECIALISTS

Prof. Bekyarova is the scientific supervisor of three doctoral students in Pathophysiology. Dr. Kamelia Zhechkova Bratoeva and Dr. Minka Hristova Alexandrova have successfully defended their dissertations. Prof. Bekyarova has also participated as a member of the scientific juries for the selection of associate professor – twice, professor – twice, doctor – three times, doctor of sciences – once, and she was a chairwoman of NJ – three times. She has reviewed articles in Bulgarian and foreign journals, and prepared reviews for scientific-research projects.

VI. TEACHING ACTIVITIES

Prof. Dr. Bekyarova is a proven teacher, with extensive professional experience in the field of Pathophysiology, with very high general, special, and language qualifications.

For many years, she has led a full-lecture course in Pathophysiology for physicians (BEO and AEO), students of Dental Medicine, Pharmacy, and various majors in medical colleges. She has also given separate lectures in the field of General and Operative Surgery.

Prof. Bekyarova has participated in the development of 9 textbooks and teaching aids. She is the author of curricula in Pathophysiology for all scientific majors.

Her report shows that she has met the minimum national requirements for participation in the competition for the academic position of "Professor".

VII. CONCLUSION

Based on the materials presented in the competition, as well as my personal and professional impressions of the candidate, I can say that Prof. Bekyarova has scientific achievements, teaching experience, and professional competence exceeding the requirements for the academic position "PROFESSOR", according to the Regulations for acquiring scientific degrees and holding academic positions at the University "Prof. Dr. Asen Zlatarov" – Burgas. Therefore, I strongly suggest to the members of the Scientific Jury to award the academic position "PROFESSOR" in "Pathophysiology" for the needs of the University "Prof. Dr. Asen Zlatarov" – Burgas to Prof. Dr. Ganka Yordanova Bekyarova, PhD.

As a member of the jury, I declare that my vote will be positive.



12.04.2021

Prof. D. Mariya Dimitrova, PhD