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# **S T A T E M E N T**

**by Associate Professor Ina Yosifova Aneva, PhD**

Institute of Biodiversity and Ecosystem Research,

BULGARIAN ACADEMY OF SCIENCES,

appointed as a member of the scientific jury by Order No. 65/04.10.2024 of the Director of IBER – BAS,

regarding the competition for the academic position of “Associate Professor”

in professional field 4.3. Biological Sciences, scientific specialty “Botany,”

for the needs of the “Applied Botany” section, Department of “Plant and Fungal Diversity and Resources,”

announced in the State Gazette, Issue No. 66/06.08.2024.

## **1. General Overview of the Submitted Materials for the Competition**

In the announced competition for the needs of the "Applied Botany" section, Department of "Plant and Fungal Diversity and Resources," a single candidate has submitted documents—Assistant Professor Dr. Boryana Zdravkova Sidjimova.

The candidate’s documents, submitted for participation in the competition, comply with the Regulations for the Implementation of the Act for the Development of the Academic Staff in the Republic of Bulgaria, as well as the Rules and Procedures for Acquiring Academic Degrees and Occupying Academic Positions at BAS and the Institute of Biodiversity and Ecosystem Research (IBER) – BAS.

The total number of scientific publications by Assistant Professor Dr. Sidjimova listed in the Scopus database is 26. The habilitation thesis includes seven publications, which are peer-reviewed and indexed in globally recognized scientific databases (Web of Science and Scopus). Additionally, 15 publications outside the habilitation thesis are presented and detailed in the compliance report regarding the requirements for occupying the academic position of “Associate Professor.”

The scientific contributions of Assistant Professor Dr. Boryana Sidjimova make a significant impact on the chemotaxonomy, alkaloid composition, and biological activity of plants from the family *Amaryllidaceae*. Her publications clearly demonstrate the high quality and importance of her scientific work. She successfully combines the depth of theoretical research with the applicability of her results, making her an exceptionally valuable researcher in the field of phytochemistry of medicinal plants.

## **2. Brief Presentation of the Candidate**

Assistant Professor Dr. Boryana Sidjimova is an established specialist in the fields of botany and phytochemistry. Her scientific career began in 2001 as a biologist at the Institute of Botany at the Bulgarian Academy of Sciences (BAS). In 2004, she became a full-time doctoral student and defended her dissertation on the topic “Biological and Phytochemical Study of Species from the Genus *Galanthus* L. (Snowdrop) in Bulgaria” in 2008, earning the educational and scientific degree of PhD.

Since 2013, she has held the position of Assistant Professor, actively participating in national and international projects. Her work includes numerous phytochemical studies, resource assessment of medicinal plants, and monitoring of conservation-significant species. Dr. Sidjimova has made significant contributions to the development of management plans for protected areas and conservation actions for plant species. Her comprehensive professional engagement underscores her active role in scientific research and the sustainable preservation of natural resources, consistently contributing her expertise and dedication to every project she undertakes.

Dr. Boryana Sidjimova is an active member of the research group "Resource Assessment and Monitoring of Rare Medicinal and Aromatic Plants," which I lead. Her contributions to the group's activities, including the development of innovative approaches to studying the chemical composition and biological activity of rare plant species, are highly significant and greatly valued.

## **3. Evaluation of Scientific Publications and Contributions**

Dr. Sidjimova participates in the current competition with scientific works that meet and exceed the required minimums established by the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) and its implementation regulations. Her achievements are as follows: Indicator A: 50 points from her dissertation for obtaining the educational and scientific degree of “Doctor”; Indicator B: 110 points from seven publications (minimum required: 100 points); Group of Indicators G: 250 points (minimum required: 220 points); Indicator D (Citations): 84 points (minimum required: 60 points). The scientometric indicators of the candidate are excellent.

The main focuses of Dr. Sidjimova's research—studies on the alkaloid composition, chemotaxonomy, and biological activity of representatives from the subfamily *Amaryllidoideae* of the family *Amaryllidaceae*—are highly relevant in the context of global scientific trends. The topic of alkaloids is particularly important due to their diverse pharmacological applications, including

the treatment of neurodegenerative diseases, which are becoming increasingly critical. Dr. Sidjimova contributes significant results, such as the identification of new alkaloids, chemotypes, and biosynthetic pathways, laying the groundwork for further research in the field.

Her work on representatives of the genus *Galanthus* and the expansion of studies to other members of *Amaryllidaceae* demonstrates consistency, systematic methodology, and scientific originality. The importance of her research is further enhanced by her contributions to uncovering taxonomic and chemotaxonomic differences within the genus *Galanthus* and other important species, while also identifying new sources of valuable alkaloids for the pharmaceutical industry.

Beyond her fundamental scientific contributions, her publications address practical issues such as the sustainable use of natural resources and the cultivation of rare plants, which are crucial for biodiversity conservation. This positions her among the leading researchers in the field of applied botany.

In conclusion, the scientific works and achievements of Assistant Professor Dr. Boryana Sidjimova not only demonstrate exceptional scientific productivity but also highlight her contributions to the sustainable management of natural resources and the application of scientific knowledge in practice. They fully meet the requirements for the academic position of "Associate Professor" and deserve high recognition.

#### **4. Overall Assessment of the Candidate's Compliance with the Competition Requirements**

Based on the documents submitted for the competition by Dr. Boryana Zdravkova Sidjimova, I am confident that she fully meets and even exceeds the criteria for the position of Associate Professor, as defined by the conditions and procedures for acquiring academic degrees and occupying academic positions under the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations of BAS, and the Regulations of IBER – BAS. Her research profile aligns completely with the requirements for the announced position.

Given the scientific contributions and merits of Dr. Boryana Zdravkova Sidjimova, I strongly recommend the members of the Scientific Jury to support her appointment to the academic position of "Associate Professor" in the scientific specialty "Botany" for the needs of the "Applied Botany" section, Department of "Plant and Fungal Diversity and Resources."