

# DECLARED OPINION

**on a competition for the appointment to the academic position of Associated Professor in higher education area 6. Agricultural Sciences and Veterinary Medicine, professional field 6.2. Plant Protection (Herbology, physiological and phytopathological mechanisms in plant protection), published in the State Gazette, issue No. 63 / 01 August 2025**

*Candidate in the competition:* Chief Assistant Professor, PhD Maria Zhivkova Kaschieva  
*Author of the opinion:* Assoc. Prof. PhD Teodora Milkova Mihova-Chavdarova, Institute of Mountain Stockbreeding and Agriculture – Troyan, Agricultural Academy, appointed in accordance with Order No. RD-16-238 / 31 October 2025 of the Rector of Shumen University “Bishop Konstantin Preslavski”.

## **1. General information about the competition and the candidate**

The competition for the academic position of Associate Professor in the field of higher education 6. Agricultural Sciences and Veterinary Medicine, professional field 6.2. Plant Protection (Herbology, physiological and phytopathological mechanisms in plant protection), was announced in the State Gazette, Issue No. 63 of 01 August 2025, in accordance with Order No. RD-16-238 / 31 October 2025 of the Rector of Shumen University “Bishop Konstantin Preslavski”.

The competition has a single applicant – Chief Assistant Professor, PhD Maria Zhivkova Kaschieva, lecturer in the Department of Herbology at Shumen University “Bishop Konstantin Preslavski”. The set of materials submitted by the candidate has been prepared with due precision and fully complies with the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), its Implementing Regulations, as well as the Regulations for the Application thereof at Shumen University “Bishop Konstantin Preslavski”.

All required reference documents and supporting materials have been submitted, and their content and format provide a solid and sufficient basis for the preparation of the present opinion.

## **2. Implementation of the minimum national requirements for the appointment to the academic position of Associated Professor**

For participation in the present competition, Chief Assistant Professor, PhD M. Kaschieva has submitted a total of 19 scientific publications and two monographs, a list of 12 positive citations, as well as documentation concerning her teaching, project-based and other professional activities, as stipulated in the Implementing Regulations of the LDASRB and the Regulations for the Development of the Academic Staff at Shumen University “Bishop Konstantin Preslavski”. As a member of the academic jury, I hereby declare that I have no joint publications with the candidate; therefore, all submitted works are subject to independent evaluation in the present opinion.

The summarized report on the fulfilment of the minimum national requirements for the academic position of Associate Professor shows that the candidate has accumulated a total of

480.40 points, exceeding the required minimum of 400 points, with the distribution by indicator groups as follows:

*Indicator Group B: 100 pts, required 100 pts.* A monograph has been submitted in the thematic group “Inventory of Weed Diversity in Arable Lands Located within Protected Area BG0002051 ‘Kaliakra Complex’.”

*Indicator Group C: 230.40 pts, required 200 pts.* The candidate has submitted a monograph that is not presented as the main habilitation work, entitled “Saffron Crocus (*Crocus sativus* L.) - From the Field to the Spice” (*Indicator C.5 - 100 points*), as well as 8 scientific publications in journals indexed and abstracted in Scopus/Web of Science (*Indicator C.7 - 96.67 points*) and 18 scientific publications in non-indexed journals with peer review or in edited collective volumes (*Indicator C.8 - 121.67 points*).

*Indicator Group D: 100 pts, required 50 pts.* For the purposes of the competition, the candidate has reported 12 citations, including citations in scientific journals indexed in Scopus/Web of Science (*Indicator D.13 - 60 points*) and citations in non-indexed peer-reviewed scientific publications (*Indicator D.15 - 40 points*).

Based on the scientific and applied research results presented by Chief Assistant Professor, PhD Maria Zhivkova Kaschieva, her participation in research and project-based activities, as well as the active dissemination and presentation of research outcomes at national and international scientific forums, a well-founded conclusion may be drawn regarding the existence of a consistent, purposeful, and in-depth research activity. The scientific output, project engagement, and expert involvement of the candidate clearly demonstrate that Chief Assistant Professor, PhD Maria Zhivkova Kaschieva is an established researcher with a high level of professional training, solid scientific competence, and a clearly expressed potential for further development and future achievements within the respective scientific field.

On the basis of the above, there are objective grounds to conclude that Chief Assistant Professor Maria Kaschieva fulfils—and with respect to certain indicators, significantly exceeds—the minimum and additional requirements for appointment to the academic position of Associate Professor at Shumen University “Bishop Konstantin Preslavski”.

### **3. General characteristics of the candidate’s research activity**

In the present competition, Chief Assistant Professor, PhD M. Kaschieva participates with a total of 19 scientific publications and two monographs. All publications are co-authored; in four of them she is the leading author, in ten she is the second author, and in the remaining publications she is listed as third or subsequent author. A substantial part of the scientific output has been published in the English language.

Within the scope of her research activity, M. Kaschieva has developed the first comprehensive scientific and practical guide to saffron production in Bulgaria, addressing the main agronomic, biological, and plant protection aspects of this crop.

As part of her herbological research, an inventory of weed communities has been conducted in arable lands within the protected area BG0000573 “Kaliakra Complex”. The obtained data reveal a high degree of species heterogeneity, characteristic of areas with high ecological value, while such a structure of weed communities implies a lower level of competitiveness with cultivated crops.

A significant contribution is also represented by her studies on the seed mycoflora of sorghum

and sorghum–Sudangrass hybrids, which establish *Alternaria alternata* (Fr.) Keissl. as the most prevalent pathogen on the seed surface.

In the field of plant biotechnology, Kaschieva has introduced into practice a method for the production of haploid plants of fodder beet, while simultaneously developing effective nutrient media for organogenesis from mashed calli of unfertilized ovules derived from different genotypes. She has also established the beneficial effect of silver nitrate, applied in various concentrations, on in vitro rooting, with higher doses proving to be more effective under certain conditions.

Her phytobiological studies on aqueous extracts of *Origanum vulgare* ssp. *vulgare* demonstrate a pronounced allelopathic activity, manifested by reduced root growth in *Cucumis sativus* L. and *Triticum aestivum* L., inhibition of mitotic activity, and induction of chromosomal alterations in *Allium cepa*. These effects reveal the potential of oregano as a source of natural herbicidal compounds. In addition, antibacterial properties have been established for aqueous extracts of *Origanum vulgare* ssp. *vulgare* and *Adonis vernalis*, with the latter exhibiting a stronger inhibitory effect. The results indicate the applicability of these species in the control of bacterial phytopathogens and as components of biological plant protection.

Further experiments show that plant extracts in a 1:1 ratio of poplar (*Populus* spp.) and thyme (*Thymus* spp.) significantly inhibit mycelial growth and spore germination of *Alternaria alternata* f. ssp. *steviae* in stevia, revealing promising prospects for their application in the biological cultivation of this crop. For the first time, the antibacterial activity of the synthetic compound Br-oxph against *Erwinia amylovora* has also been investigated, with the demonstrated bactericidal effect opening possibilities for its use in the control of various phytopathogenic bacteria.

Based on the presented scientific and applied research results, the candidate's participation in research and project activities, as well as the active dissemination and presentation of outcomes at national and international scientific forums, a well-founded conclusion can be drawn regarding the consistent, focused, and in-depth nature of her research work. The scientific output, project involvement, and expert engagement of Chief Assistant Professor, PhD Maria Zhivkova Kaschieva demonstrate that she is an established researcher and lecturer with high professional training, solid scientific competence, and a clearly expressed potential for further development and future achievements in the respective scientific field.

#### **4. Evaluation of teaching activity**

The teaching activity of Chief Assistant Professor, PhD Maria Kaschieva began in 2011 at the Department of Plant Protection at Shumen University “Bishop Konstantin Preslavski”, where she conducts teaching activities with students in the Bachelor's and Master's degree programmes in the fields of Plant Protection, Ecology and Environmental Protection, Pedagogy of Education in Biology and Chemistry, and Pedagogy of Education in Geography and Biology. Her teaching portfolio covers a broad range of academic disciplines, including Plant Physiology, Structure and Life Processes of Plants, Herbology, Agrochemistry, Selection and Seed Production of Cultivated Plants, Hydroponic Systems, Phytopharmacy in Organic Agriculture, and Plant Protection in Urban Environments. The candidate is actively involved in the development of elective and optional courses and serves as a supervisor of student coursework and diploma theses successfully defended by graduating students.

#### **5. Critical Remarks and Recommendations**

I have no critical remarks or recommendations regarding the content or presentation of the materials submitted for the competition. I wish Chief Assistant Professor, PhD M. Kaschieva continued success in the further development and advancement of her work in the selected scientific fields.

## CONCLUSION

Based on the comprehensive evaluation of the materials submitted for the competition and the analysis of the candidate's scientific, applied research, and teaching activities, I conclude that Chief Assistant Professor, PhD Maria Zhivkova Kaschieva fully meets the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria, its Implementing Regulations, and the Regulations for their application at Shumen University "Bishop Konstantin Preslavski". I give a positive assessment of the content, relevance, and contributions of the submitted scientific works, as well as of her overall teaching activity.

As a member of the academic jury, I hereby express my **POSITIVE** evaluation and find it well justified to propose that Chief Assistant Professor, PhD Maria Zhivkova Kaschieva be elected to the academic position of Associate Professor in professional field 6.2. Plant Protection (Herbology, physiological and phytopathological mechanisms in plant protection).

15.12.2025  
Shumen

Member of the Academic Jury:



/Assoc. Prof. PhD T. Mihova-Chavdarova/