REVIEW

regarding the competition for the academic position of "Associate Professor" in Field of Higher Education 6. Agricultural Sciences and Veterinary Medicine, Professional Field 6.1. Crop Science, scientific specialty "Ornamental Plants", announced in the State Gazette, issue No. 48 of 26 May 2026, with Chief Assist. Prof. Valentin Panchev Panchev, PhD, as the candidate
by Irena Asparuhova Golubinova, Institute of Ornamental and Medicinal Plants – Sofia, appointed as a member of the Scientific Jury pursuant to Order No. RD 16-812/29.06.2026 of the Rector of the Agricultural University – Plovdiv

Reviewer: *Assoc. Prof. Irena Asparuhova Golubinova, PhD, Institute of Ornamental and Medicinal Plants – Sofia, Field of Higher Education 6. Agricultural Sciences and Veterinary Medicine, Professional Field 6.1. Crop Science, scientific specialty "Plant Breeding and Seed Production", appointed as a member of the Scientific Jury pursuant to Order № РД 16-812/29.06.2026 of the Rector of the Agricultural University – Plovdiv.*

1. General information on the candidate's career and thematic development

Chief Assist. Prof. Valentin Panchev Panchev, PhD, is a graduate of the Agricultural University – Plovdiv. In 2006, he obtained a Bachelor's degree in Agronomy from the Agricultural University – Plovdiv. In 2007, he obtained a Master's degree in Landscape Design, and in 2013 he acquired the professional qualification of teacher. His professional development combines teaching and research experience: he worked as a teacher and, since 1 April 2015, has been a lecturer at the Department of Horticulture of the Agricultural University – Plovdiv. The candidate was awarded the educational and scientific degree Doctor (PhD) on 7 December 2018 after defending a dissertation entitled *"Studies on Different Methods of Propagation of Species of the Genus Tilia"*. Since 3 June 2019, he has held the academic position of Chief Assistant Professor. As of 30 June 2026, his teaching experience amounts to 11 years, 3 months and 9 days.

The career development of Chief Assist. Prof. Valentin Panchev is associated with active teaching and research activities. His thematic development is consistent and directly related to the announced competition. His publications and applied research outline a profile in ornamental horticulture, with emphasis on seed, vegetative and *in vitro* propagation, pre-sowing ultrasound treatment, methods for overcoming seed dormancy, evaluation of ornamental genotypes, and technological solutions for plant production and cultivation.

2. General description of the submitted materials

The candidate has submitted evidence of scientific and teaching activities, a scientometric table, a declaration of compliance with the minimum national requirements, an extended habilitation report, a statement of scientific contributions, information on impact factors, scientific projects and forums, a list of citations and supporting evidence, documents concerning Erasmus+ mobilities, qualification courses, and copies of the scientific publications. In terms of scope and content, the submitted materials allow for a well-founded assessment of the candidate's scientific, teaching, and academic activities.

In the competition for the academic position of "Associate Professor", Chief Assist. Prof. Valentin Panchev Panchev, PhD, participates with 37 works, grouped as follows:

- *Scientific publications in the relevant scientific specialty – 36 works, of which:*

- 7 publications related to the doctoral dissertation and the competition for the academic position of Chief Assistant Professor, which are not subject to evaluation;

- *1 published book based on the defended doctoral dissertation;*
- *6 publications with an impact factor;*
- *10 publications in peer-reviewed and refereed scientific journals;*
- *12 publications in conference proceedings.*

The personal contribution of Chief Assist. Prof. Valentin Panchev Panchev, PhD, to the above-mentioned 29 works is demonstrated by the fact that 10 are single-authored, in 5 he is the first author, in 9 he is the second author, and in the remaining 5 he is the third or a subsequent author.

- *Textbooks – none.*
- *Teaching manuals – none.*

For the purposes of this review, a total of 29 works are subject to analysis, including 28 articles and 1 book based on the defended doctoral dissertation.

The published book based on the defended doctoral dissertation is not subject to repeated analysis as a dissertation work, but it contributes to the candidate's overall scientific profile.

Compliance with the minimum national requirements under Art. 2b, paras. 2, 3 and 5 of the Act for the Development of Academic Staff in the Republic of Bulgaria and the Annex to Art. 1a of the Regulations for its Implementation /number of points by indicators/

Group of indicators	Indicator	Minimum requirements	Candidate's score
A	Dissertation for the award of the educational and scientific degree "Doctor (PhD)"	50	50
B	B4. Habilitation work – scientific publications (not fewer than 10) in publications that are refereed and indexed in internationally recognized scientific databases	100	255
G	G6. Published book based on a defended dissertation for the award of the educational and scientific degree "Doctor (PhD)" or the scientific degree "Doctor of Sciences"	200	40
	G7. Articles and papers published in scientific journals that are refereed and indexed in internationally recognized scientific databases		145
	G8. Articles and papers published in non-refereed peer-reviewed scientific journals or in edited collective volumes		71,65
D	D13. Citations or reviews in scientific publications that are refereed and indexed in internationally recognized scientific databases, or in monographs and collective volumes	50	45
	D15. Citations or reviews in non-refereed peer-reviewed scientific journals		10
	Total number of points	**400**	**616,65**

The data presented in the table indicate that Chief Assist. Prof. Valentin Panchev, PhD, meets the minimum national requirements for all groups of indicators for appointment to the academic position of "Associate Professor", with a total scientometric score of 616.65 points, compared with the required 400 points.

3. Main research areas of the candidate. Demonstrated skills or potential for leading scientific research (project management, attracted external funding, etc.).

The research activities of Chief Assist. Prof. Valentin Panchev Panchev, PhD, are thematically related to the announced competition, meet and exceed the minimum

national requirements under the Act for the Development of Academic Staff in the Republic of Bulgaria and the Regulations for its Implementation, and outline a consistent scientific profile in the field of "Ornamental Plants".

The first main research area concerns the effects of pre-sowing ultrasound treatment on the viability and sowing quality of seeds of ornamental species. Key indicators of germination and early development have been monitored, and species- and cultivar-specific responses have been established, together with stimulatory or inhibitory effects depending on the duration of treatment.

The second research area comprises cultivar and technological studies on gladiolus, including cultivar evaluation, nitrogen fertilization, overwintering of corms, and ultrasound treatment of seeds. The results obtained allow the formulation of practical recommendations for cultivar selection and for optimizing individual elements of the cultivation technology.

The third research area is related to the seed, vegetative, and *in vitro* propagation of ornamental plants, with particular emphasis on species of the genera *Tilia* and *Ficus*, as well as *Angelonia angustifolia*. Approaches to overcoming seed dormancy, rooting, and micropropagation have been studied with a view to obtaining high-quality planting material.

The candidate's skills in organizing scientific research are confirmed by his participation in 12 research projects, one of which he has led as project leader. He is the leader of Project No. 10-24 (2024–2026), focused on agrotechnological practices and the ornamental qualities of gladiolus genotypes. He has also participated in the National Scientific Programmes "Young Scientists and Postdoctoral Researchers" and "Young Scientists and Postdoctoral Researchers – 2", funded by the Ministry of Education and Science. Participation in 18 scientific forums has also been documented, including 16 international and 2 national events.

4. Assessment of the candidate's pedagogical training and teaching activities. His role in the training of young researchers.

The candidate's teaching activity is extensive, diverse, and thematically related to his scientific profile. He conducts practical classes in 13 disciplines in Bachelor's degree programmes, delivers lectures in five disciplines, and supervises practical training in three disciplines. In Master's degree programmes, he participates in both lectures and practical classes in six disciplines - "Floriculture," "Ornamental Dendrology," "Ornamental Nurseries," "Bouquet and Flower Arrangement," "Quality Assessment and Storage of Vegetables and Flowers," and "Computer-Aided Design of Landscape Sites."

For the period 2021/2022–2025/2026, a total teaching workload of 3,680.35 equivalent hours, including both classroom and extracurricular teaching activities, has been documented. The candidate has developed curricula for "Bouquet Arrangement" and "Quality Assessment and Storage of Vegetable and Flower Produce" for both full-time and part-time study. He has also participated in updating course content and has established a clear link between teaching, experimental work, and practice.

As a scientific supervisor, he has contributed to the training of 23 students who successfully defended their Bachelor's and Master's theses. The thesis topics are related to the propagation and cultivation of ornamental plants, morphological and ornamental evaluation, fertilization, and landscape design projects. This demonstrates a sustained commitment to the students' research and practical training.

5. Significance of the results obtained, as demonstrated by citations, publications in prestigious journals, awards, membership in international and national scientific bodies, etc.;

The scientific results have been published in both national and international scientific journals. Six of the listed publications appear in journals with reported quartile rankings, impact factors, or SJR/JCI indicators. Some of the publications are indexed in Web of Science and/or Scopus, which enhances their visibility and traceability.

Five identified citations have been presented. Although the number is moderate, the citations are thematically relevant and indicate that the results have been reflected in subsequent scientific studies.

The candidate's international activity is further demonstrated by four Erasmus+ mobilities in Poland, the Czech Republic, Jordan, and Turkey, carried out in 2017, 2018, 2019, and 2025, respectively. Participation has also been documented in ENTER qualification initiatives in 2013, 2014, 2018, and 2025, as well as in training on safe grain production in China and methodological training.

The candidate is a member of the Union of Scientists in Bulgaria – Plovdiv Branch, has participated in scientific and organizational activities, and has received an award for his contribution to supervising a student scientific conference.

6. Significance of the contributions to science and practice. A reasoned assessment of the extent to which the candidate has a clearly defined research profile;

The submitted scientific output outlines a clearly identifiable and consistently developing research profile in the field of ornamental horticulture. The scientific studies can be grouped into several interrelated research areas: stimulation of seed viability and overcoming seed dormancy; improvement of seed, vegetative, and *in vitro* propagation; investigation of cultivar, species and specific responses to different agrotechnological treatments; optimization of cultivation and production technologies for ornamental plants; and assessment of the biological and ornamental characteristics of promising plant species. In this way, a logical link is established between the fundamental observation of the processes of germination, growth, and development and the practical objective of obtaining vigorous and high-quality planting material.

The contributions resulting from the scientific activity of Chief Assist. Prof. Valentin Panchev, PhD, provide sufficient grounds to conclude that he has a clearly established, sustainable, and consistently developing research profile that fully corresponds to the announced scientific specialty.

I. ORIGINAL SCIENTIFIC CONTRIBUTIONS

- Appropriate exposure durations for ultrasound treatment of seeds of a range of ornamental species have been determined, and species- and cultivar-specific responses have been demonstrated, including both stimulatory and inhibitory effects depending on the duration of treatment.
- Elements of an effective protocol for *in vitro* micropropagation of species of the genus *Tilia* have been developed and tested, including the selection of suitable explants, sterilization procedures, culture medium, multiplication, and rooting. The results obtained expand the possibilities for producing high-quality planting material from species that are difficult to propagate by conventional methods.
- Results have been obtained on the micropropagation of *Angelonia angustifolia*, and suitable conditions for sterilization, multiplication, and rooting have been established.
- New data for the conditions of Bulgaria have been obtained on cultivar response, phenological development, overwintering, and ornamental value of gladiolus genotypes. Cultivar differences have been established, allowing recommendations to be formulated for the selection of suitable genotypes and cultivation technologies. Of scientific interest are also the data on the distribution and status of populations of *Goniolimon dalmaticum*

and on seasonal and geographical differences in the content of biologically active compounds in *Ginkgo biloba*.

II. METHODOLOGICAL CONTRIBUTIONS

- Standard methods for seed evaluation have been combined with correlation, regression, and analysis of variance, and an integrated approach has been applied to the assessment of ornamental crops using phenological, morphological, productivity, and ornamental indicators.
- Patterns in the effects of ultrasound treatment on germination, germination rate and uniformity, and early plant development have been established.
- Knowledge of the relationships between nitrogen nutrition, growth, and ornamental qualities in gladiolus has been expanded, as has knowledge of seed dormancy release and the seed, vegetative, and micropropagation of linden and other ornamental species.

III. SCIENTIFIC CONTRIBUTIONS

- Patterns in the effects of ultrasound treatment on germination, germination rate and uniformity, and the early development of seedlings have been established. It has been demonstrated that the effect is determined both by the duration of treatment and by the biological characteristics of the species and cultivar.
- Relationships between nitrogen nutrition, vegetative growth, the onset and duration of flowering, and the ornamental qualities of gladiolus have been clarified.
- Knowledge has been expanded regarding the overcoming of seed dormancy and the seed, vegetative, and micropropagation of linden and other ornamental species.
- Additional data have been obtained on the biological, phenological, and ornamental characteristics of a range of flowering, tree, and shrub species, thereby expanding knowledge of their potential for production and use in ornamental horticulture

IV. APPLIED CONTRIBUTIONS

- Specific recommendations have been formulated for pre-sowing seed treatment, cultivar selection, and nitrogen fertilization in ornamental crops.
- Technological solutions have been proposed for the production of planting material and for more efficient seed, vegetative, and *in vitro* propagation of ornamental species that are difficult to propagate.
- The possibility of successful overwintering of corms of certain gladiolus cultivars has been established, with potential for reducing some of the annual operations and costs associated with seasonal landscape planting.
- Applicable results have been obtained regarding the use of organic components in growing substrates for annual ornamental crops, as well as for stimulating rooting in representatives of the genus *Ficus*.
- Of practical significance are the results related to optimizing the timing of seed collection and treatment in linden, as well as the possibility of extending the period of use of certain ornamental species in seasonal landscape planting.

In assessing the contributions, their thematic interconnectedness should also be taken into account. The studies on linden encompass issues related to seed propagation and dormancy, the influence of environmental conditions, vegetative propagation methods, and the development of an *in vitro* system. Similarly, in gladiolus, cultivar evaluation, nutrient regime, ornamental traits, overwintering potential, and seed propagation are examined in an interconnected manner. In this way, the individual results form a coherent body of research aimed at improving technologies for the production and use of ornamental plants. A further strength is the use of measurable indicators, appropriate statistical analyses, and the effort to translate the scientific results obtained

into practically applicable recommendations.

The publication profile is balanced between single-authored and collaborative works. The ten single-authored publications demonstrate the ability to independently formulate, conduct, and present research, while the remaining works indicate sustained participation in research teams. A substantial part of the scientific output has been published in English in international journals and presented at international scientific forums. The publications cover the main areas of the candidate's research activity—propagation, seed physiology and viability in ornamental species, cultivar and phenological evaluation, fertilization, assessment of ornamental qualities, and the production and adaptation of planting material. This forms a sufficiently broad, yet thematically coherent, academic profile.

The relationship between the candidate's research and teaching activities is positive, and the species and technologies studied naturally fit within courses in floriculture, dendrology, ornamental nurseries, and quality assessment and storage of plant produce. The supervised thesis projects address topics closely related to practical problems in ornamental horticulture and landscape practice. Thus, the candidate's scientific activity has a direct educational impact and contributes to the development of practical and research competencies among students.

In summary, the presented scientific and applied scientific contributions outline a clearly defined and consistently developing research profile of the candidate in the field of ornamental plants. They combine the generation of new scientific knowledge with the development of practically applicable technological solutions for the propagation, production, and cultivation of ornamental species.

7. Critical remarks and recommendations

I have no critical remarks regarding the materials submitted for the competition for the academic position of "Associate Professor." The scientific output is thematically related to the announced specialty, and the results obtained have both scientific and practical value.

As a recommendation for future work, I would suggest expanding some of the experiments by conducting them over a greater number of years, under different conditions, and with a larger number of genotypes, which would enhance the reliability and applicability of the results obtained.

The studies on ultrasound treatment could be further developed by focusing more deeply on the physiological and biochemical mechanisms underlying the stimulatory and inhibitory effects on seeds and young plants.

For the developed propagation and cultivation technologies, it would be useful to include an assessment of their effectiveness under production conditions and, in the case of applied developments, an economic evaluation of the proposed solutions.

I recommend more active publication of the results in international scientific journals with higher visibility, as well as the development of a teaching manual that would summarize the accumulated scientific, methodological, and practical experience.

These recommendations do not alter my positive assessment of the candidate's scientific and teaching activities, but rather outline opportunities for their further development.

8. Personal impressions and reviewer's opinion

I have no basis for expressing personal impressions beyond those derived from the materials submitted for the competition. On the basis of these materials, the candidate can be characterized as a consistent and goal-oriented lecturer and researcher with a clearly defined professional and scientific profile in the field of ornamental plants.

The submitted scientific output demonstrates the ability to independently formulate

and conduct scientific research, as well as to work effectively as part of a research team. Participation in scientific projects and international mobilities, supervision of thesis students, and active teaching activities indicate a high level of academic commitment and accumulated experience in the training of young specialists.

I positively assess the consistency between the candidate's scientific interests, teaching activities, and the practical orientation of his research, while the scientific results obtained are applicable both in the educational process and in ornamental horticulture. I consider that Chief Assist. Prof. Valentin Panchev Panchev, PhD, possesses the necessary scientific independence, teaching experience, and academic maturity, and that his professional profile corresponds to the scientific specialty "Ornamental Plants" and to the needs of the Department of Horticulture.

CONCLUSION

Based on the analysis of the candidate's teaching, scientific, and applied research activities, I consider that Chief Assist. Prof. Valentin Panchev Panchev, PhD, meets the requirements of the Act for the Development of Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation, and the Regulations of the Agricultural University for their application. He possesses the required educational and scientific degree, the necessary teaching experience, scientific output of sufficient volume and quality, demonstrated teaching, project, and scientific-organizational activity, experience in supervising thesis students, and a clearly defined research profile in the field of ornamental horticulture.

All of the above provides sufficient grounds for me to assess his overall activity POSITIVELY.

I therefore respectfully propose that the Scientific Jury also vote positively and that the Faculty Council of the Faculty of Viticulture and Horticulture at the Agricultural University – Plovdiv elect Chief Assist. Prof. Valentin Panchev Panchev, PhD, to the academic position of "Associate Professor" in the scientific specialty "Ornamental Plants."

Date: 09 September 2026
Sofia

REVIEWER:.....
(*Assoc. Prof. Irena Asparuhova Golubinova, PhD*)