



STATEMENT

**to the competition for „Professor” in the scientific specialty "Ornamental Plants",
announced in SG no. 7 of 25.01.2022 with a candidate
Assoc. Prof. Dr. Valeria Stefanova Ivanova**

by Assoc. Prof. Dr. Kostadin Kostadinov, Agricultural University-Plovdiv, appointed according to Order № 16-901/25.09.2023 of the Rector of Agricultural University -Plovdiv for chairman of the Scientific jury

1. Brief introduction of the candidate.

Assoc. Prof. Dr. Valeria Ivanova was born on February 23, 1963. She graduated in the Faculty of Viticulture and Horticulture at the Agricultural University-Plovdiv in 1986. Since 1997 after defending her PhD thesis with title „Optimizing plant load and nitrogen fertilization in cut flower chrysanthemum (*Chrysanthemum indicum L.*) cultivation in polyethylene greenhouses" in 2003, she was a PhD. Since 1986 was an agronomist, programmer at the Scientific and Production Laboratory for Tissue Cultures at the Institute of Floriculture-Sofia, Negovan (Institute of Decorative and Medicinal Plants), and since 1989 researcher at the same institute. Since 1991 has been an Assistant since 1993, Senior assistant, since 1996 Chief assistant, and since 2007 Associate professor at Agricultural University-Plovdiv. Since 2020, she holds the administrative position of the Chairman of the General Assembly of the FLH at AU-Plovdiv. Her main scientific and teaching activity is the connection with studies in the field of Floriculture and Ornamental Dendrology.

2. General description of the scientific production.

The total scientific output of Assoc. Prof. Dr. Valeria Ivanova, for her entire career is summarized in 33 scientific papers. It fully covers the minimum national requirements for the academic position of "Professor", and for its participation in the competition has presented a total of 78 scientific papers, grouped in directions.

Scientific publications in the scientific field and the nomenclature specialty - 33 publications, of which:

- Articles and reports published in scientific publications, referenced and indexed in world-famous databases with scientific information - 15 issues (45%);
- Articles and reports published in non-refereed peer-reviewed journals or published in edited collective volumes-18 issues (55%).

The personal participation of Assoc. Prof. Dr. Valeriia Ivanova in the mentioned 33 works is illustrated by the fact that there are 5 independent publications, in 15 she is the first, in 10 she is the second, in 4 she is the third and in 2 she is the fourth author, which is proof and for her successful teamwork.

- Monographs - 2, of which one independent and one is co-authored with two other authors;
- Study Guide for Students - 1 item.

All 33 issues are subject to analysis for the preparation of the opinion.

3. Teaching activity.

The teaching experience of **Assoc. Prof. Dr. Valeria Ivanova** is over 32 years old. Her work as a teacher is significant. She has conducted classes with full-time and part-time Bachelor's students in almost all specialties at the Agricultural University- Plovdiv. She has conducted also lectures and exercises in the following Masters courses: "Ornamental Plants and Landscape Design", Ecology of Settlement Systems, Agrobusiness. In addition, she also led classes in English with students of the European program ERASMUS+ and Tempus. Prof. V. Ivanova also held lectures at foreign universities in Germany, Greece, Lithuania.

Candidate's teaching employment.

Throughout the years she has fulfilled the required norm for teaching workload of lectures and

exercises. Her teaching activity is complemented by the scientific guidance of 66 successfully defended graduates student and two successfully defended PhD students.

Published study materials

She has published one Study Guide for Students .

Developed educational curricula.

She has developed 28 curricula in a large number of disciplines: Floriculture, Ornamental Dendrology, Ornamental Horticulture, Dendrology and Landscaping, General Floriculture, Outdoor Flowers, Greenhouse Floriculture, General Dendrology, Specialty Dendrology, Ornamental Nurseries, Bouquet Arranging, Ornamental Application, Ornamental Nursery Management, Propagation of Ornamental Plants , Landscape design and Territorial and park planning. All curricula are developed according to the requirements, in the required completeness, according to the hours and are adapted for the different courses and specialties in the Bachelor's degree and the Master's degree

She is the author of a curriculum in English for training students in the discipline "Floriculture", specializing in Plant Protection.

4. Research activity.

The main directions of the scientific activity of Assoc. Prof. Ivanova are related to the biotechnological and conventional methods of reproduction, as well as to the improvement of the technology of growing of various ornamental crops; and studies on the use of ornamental trees and shrubs in landscape sites.

As a result of her research, she developed the most suitable nitrogen rates for obtaining high and quality yields of chrysanthemum, develops a basis for improving the system for the quality of the production of cut flowers from chrysanthemum, optimizing the measures for obtaining high quality yields, diagnosing the need for nutritional elements by phases. A six-minute sonication induced the greatest increase in germination in *Lupinus polyphyllus* Lindl. and *Lupinus mutabilis* Sweet. Determines the influence of environmental conditions on the phenological development of *Tilia platyphyllos* Scop. She found that the seeds of *T. cordata*, *T. platyphyllos*, *T. tomentosa*, grown from seeds collected respectively 1.08 ., have the fastest growth rate; 1.09. and 15.08. Determines the differences between the linden species *Tilia platyphyllos* Scop., *Tilia cordata* Mill. and *Tilia tomentosa* Moench by the duration of several seedling phenological phases, depending on the timing of seed harvesting; positive correlation between GA3 concentration and vegetative growth of *Ginkgo biloba* L.

It found that the biostimulant Charcor added to MS liquid nutrient medium was highly effective in rooting *Magnolia grandiflora* L. and *Magnolia* × *soulangeana* Soul.-Bod; the highest rooting rate of large-leaved linden (*Tilia platyphyllos* Scop.) was achieved on MS medium with half macronutrient content enriched with 0.3 mg l-1 indolyl-3-butyric acid (IBA); the aromatic cytokinin metatopolin stimulates plant growth of *Camptotheca acuminata* Decne (Nyssaceae); develops methods for in vitro micropropagation of *Ginkgo biloba* L.; in vitro propagation of 2-bud shoot tips of *Ginkgo biloba* L. on MS or WPM nutrient media was initiated for the first time; water deficit was greatest at the highest concentration of PEG-6000 and the longest duration of application in mini carnation (*Dianthus caryophyllus* f. spray, Hort.).

Improves the cultivation technology of *Gladiolus hibrydus*, *Dahlia variabilis*, *Tagetes*, *Ginkgo biloba* L., annual flowers - *Antirrhinum*, *Tagetes*, *Zinnia* and *Verbena*, asters (*Callistephus chinensis*), helichrysum (*Helichrysum bracteatum*) and echinacea (*Echinaceae purpurea*), *Verbascum thapsus*, various species of the genus *Capsicum*.

She reports that the application of a peat-perlite substrate in propagating aucuba (*Aucuba japonica* Thub.) through mature cuttings has the highest percentage of rooting; treatment with IBA at a concentration of 1000 ppm was most effective in propagating *Lonicera nitida* Wils. through mature cuttings.

She found that the leaves from the *Ginkgo biloba* L. trees from Plovdiv and Hisar have the highest concentration of ginkgolides A, B, C and bilobalide; investigates changes in gas exchange and total chlorophyll content in seed leaves of three linden species - *T. grandifolia*, *T. argentea* and *T. parvifolia*.

Recommends silver nitrate and chlorhexidine gluconate as effective surface sterilizing agents in disinfection procedures when introducing lignified tissues and embryos into culture; WPM medium supplemented with 6.841 zeatin for best shoot tip survival in *T. baccata* L.

She proves that the treatment of the seeds of *Magnolia grandiflora L.* with Biolan and Agrostimulin has a favorable effect on the further development of the seeds, and treatment of the seeds after their stratification with Agrostimulin (0.005%) has a positive effect on the development of their root system; the application of the controlled-release granular fertilizer Osmocote in the substrate for further cultivation of *in vitro* propagated plants of *Magnolia grandiflora L. and Magnolia x soulangiana Soul.-Bod.* positively affects the growth and development of plants; the treatment with Biolan (0.01%) for 12 hours significantly stimulates the germination of the seeds and in the Balkan endemic species with valuable decorative qualities included in the Red Book of Bulgaria - *Limonium bulgaricum Anchev and Goniolimon dalmaticum (C. PRESL) RCHB.F.* I fully accept the indicated scientific-theoretical, original and scientific-applied contributions, which fully represent the scientific activity of the candidate and correspond to the results obtained and presented in the publications.

Areas of publication.

The publications of the results of the research of Assoc. Prof. Dr. V. Ivanova are mainly related to the field of Plant Breeding and especially in the direction of improvement of biotechnological methods for propagation and cultivation of Ornamental species, as well as improvement of the system for quality of their production. Many of her scientific works have been published in world-renowned high-index journals and referenced in world-renowned databases.

Citing and abstracting scientific research.

The importance of her research is confirmed by the large number of established citations - 4 publications, cited 10 times, as well as the high h-index = 7. It should be noted that one of her articles is cited 5 times in scientific papers cited in the **Scopus** database.

Participation in research projects.

All these scientific researches and the mentioned achievements are a result of the active participation of Assoc. Prof. Ivanova in 5 national and 15 projects with intra-university funding, as a leader or as a member of the research teams.

5. Remarks and recommendations.

I have no serious remarks regarding the teaching and research activities of Assoc. Prof. Ivanova. I would recommend that she continue to publish in world-famous scientific journals, as well as to summarize the accumulated extensive scientific experience in a specialized book or monograph. I also consider it appropriate to deepen its educational activities, through organizing and developing new courses and disciplines, both for the Agricultural University-Plovdiv and for external participants, such as in the Center for further education .

6. Conclusion.

Based on the analysis of the pedagogical, scientific and scientific-applied activity of the candidate, I believe that Assoc. Prof. Dr. **Valeria Stefanova Ivanova** meets the requirements of Law for the Development of the Academic Staff in the Republic of Bulgaria, Rules for the application of the Law for the Development of the Academic Staff in the Republic of Bulgaria of the Agricultural University - Plovdiv for its application, for which the reason give me hers considerable teaching activity, its large-scale scientific and research work in a modern and important field, as well as significant and high-value publications and the large numbers of citations.

All this gives me reason to appreciate **POSITIVELY** her overall work.

I would like to suggest to the esteemed Scientific Jury also to vote positively, and the Faculty Council of the Faculty of Viticulture and Horticulture at the Agricultural University - Plovdiv to elect Assoc. Prof. Dr. **Valeria Stefanova Ivanova** as "Professor" in the field of "Ornamental plants".

Date: 14. XI. 2023 r.
Plovdiv

Prepared the Statement:

(Assoc.-prof. Dr. Kostadin Kostadinov)