OPINION

in a competition for the academic position of "Associate Professor" in the field of higher education - 6. Agricultural Sciences and Veterinary Medicine, Professional field 6.1. Crop production, Scientific specialty "Breeding and seed production of cultivated plants"

announced in SG 65/06.08.21 for the needs of the Technical University - Varna, Faculty of Mechanical Engineering, Department of Crop production

with candidate Ch. Assistant Professor Dr. Nadia Georgieva Daskalova
by Prof. Dr. Hristofor Kirchev Kirchev, Agricultural University - Plovdiv, appointed according to Order № 572 / 21.09.2021 as a member of the scientific jury.

1. General characteristics of the research and scientific-applied activity of the candidate.

In the competition for "Associate Professor" Ch. Assistant Professor Dr. Nadia Georgieva Daskalova participates with a total production of 27 works, grouped as follows:
Scientific publications in the nomenclature specialty - 27 issues, of which:
- Monographic work - 1 issue;
- Articles and reports published in scientific journals, referenced and indexed in world-famous databases with scientific information - 13 issues;
- Articles and reports published in non-peer-reviewed journals with scientific review or published in edited collective volumes - 13 issues.
27 issues are subject to analysis for the preparation of the opinion.

From the presented reference for fulfillment of the minimum national requirements for holding the academic position “Associate Professor” in the field of higher education 6. Agricultural Sciences and Veterinary Medicine, Professional field 6.1. Crop production, it is evident that the candidate meets the minimum national scientometric requirements. Of the required 400 points, the total number that the candidate presents are 543.4 points.

2. Assessment of the pedagogical activity of the candidate

As a lecturer at the Department of Crop production, Ch. Assistant Professor Dr. Nadia Daskalova conducts laboratory exercises at the Bachelor's Degree - Agronomy in almost all agronomic disciplines in full-time education (Crop production, Genetics and Biotechnology, Plant Protection, Fruit Growing, Viticulture and Vegetable Production). From the academic year 2012/2013 she also teaches in Breeding and seed production of cultivated plants. After the start of the master's degree in "Production of seeds and planting material", her involvement has increased with the disciplines Production of seeds from cereals and fodder crops, Plant and genetic resources and Integrated pest management. After creating a master's degree in "Seed Production and Plant Protection", in addition to the commented laboratory classes, she also presented laboratory classes on Plant Quarantine, Good Plant Protection Practices and Principles of Integrated Pest Management, Forecast and Signaling for Plant Protection, Phytopharmacy, Entomology and Phytopathology.

During the period since acquiring the academic position of Chief Assistant, she has trained and led to successful defense of 11 graduates. She has developed 6 curricula. She has published 3 manuals for exercises (in Crop production 1st and 2nd part and Herbology) and one textbook with a practical focus - Handbook of Herbology, which is related to seed production of cultivated

plants. She has built 3 laboratories, as part of the equipment in them is the result of her participation and attracting additional funds for the project.

3. Main scientific and applied scientific contributions

The research activity of Ch. Assistant Professor Dr. Nadia Daskalova is fully related to the scientific specialty in which the competition was announced, namely the breeding and seed production of cultivated plants.

The candidate works in the field of remote hybridization with cereals: bread and durum wheat, cultivated and wild species of the genus *Triticum* and *Aegilops*, rye and triticale. A number of breeding methods and approaches have been applied (pedigree method, backcross, experimental mutagenesis, anter culture, inbreeding, selection of high- and low-molecular-weight glutenins, etc.).

The presented monographic work is based on in-depth studies of synthetic amphiploids, products of interspecific and intergeneric hybridization of wheat species with their close related species of *Triticineae*. The monograph contains valuable scientific information and can be very useful for all specialists involved in breeding, especially in the field of remote hybridization.

Like the monograph, the scientific publications submitted for the competition are also related to the remote hybridization between wheat and species of the genera *Aegilops* and *Secale*. The main scientific and applied contributions are focused on studies on the cross-breeding of wheat and the resulting amphiploids with related species in the *Triticinae* group to create fertile hybrids; Preparation and characterization of synthetic amphiploids as starting material for breeding; Classification and relatedness of species in *Triticum* and *Secale*; Newly selected common wheat lines of crossbreed *Triticum aestivum* × *Aegilops* variabilis with resistance to fungal pathogens; New lines of common wheat obtained with the participation of the synthetic amphiploid №530, which have valuable protein subunits other than those in bread wheat; Durum wheat lines with the participation of amphiploid 8BAP were selected; Offspring of two-grained einkorn with the participation of amphiploid 5BAP were selected and breeding of low-stemmed inbred rye lines was applied.

4. Significance of contributions to science and practice

The significance of the contributions of Ch. Assistant Professor Dr. Nadia Daskalova is evidenced by the serious recognition of the work and, which is confirmed by the fact that 11 of the citations of her works are in scientific journals, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes. , of which 5 are in articles from journals with IF and a different Quartile from Web of Science; 1 piece is from a chapter of a book under the auspices of Springer; 3 pcs. are from articles in the Scopus database; 1 piece. article in the list of Web of Science (CABI) and 2 issues in articles from conferences in Web of Science. The serious international evaluation of the candidate's works is impressive.

Ch. Assistant Professor Dr. Nadia Daskalova participates in 13 projects, most of which within the inherent research activities of TU-Varna, one under the Operational Program "Development of the Competitiveness of the Bulgarian Economy", one international project funded by the International Agency for nuclear energy and one financed by AA-Sofia.

The newly created bread and durum wheat lines, the result of the candidate's experimental work, have a high selection value for increasing the genetic diversity and quality potential of these crops. The work on creating inbred rye lines is also promising, with a multifaceted practical focus.

5. Critical remarks and recommendations

I have no remarks about the scientific activity of Ch. Assistant Professor Dr. Nadia Daskalova, as it fully covers the minimum scientometric requirements specified in the Regulations for the implementation of the Law on the Development of the Academic Staff of TU-Varna.

It is noteworthy, however, that the candidate conducts classes in atypical for her scientific specialty and even in other professional disciplines (Entomology, Phytopathology, Phytopharmacy, Integrated Pest Management, etc.) and publishes textbooks in other scientific specialties (Crop production, Herbology).

I recommend in the future, as a specialist in breeding and seed production to teach and publish textbooks in the scientific specialty "Breeding and seed production of cultivated plants."

CONCLUSION

Based on the analysis of the scientific and scientific-applied activity of the candidate, I believe that Ch. Assistant Professor Dr. Nadia Georgieva Daskalova meets the requirements of Law and Regulations for the implementation of the Law on the Development of the Academic Staff of TU-Varna.

Valuable scientific works and results, highly appreciated by the scientific community, are presented. I think that Ch. Assistant Professor Dr. Nadia Daskalova is a researcher, breeder with sufficient competence and professional interest in the field of breeding and seed production of cultivated plants.

All this gives me a reason to POSITIVELY evaluate its overall activity.

I allow myself to propose to the esteemed Scientific Jury also to vote positively, and the Faculty Council of the Faculty of Mechanical Engineering at the Technical University - Varna to elect Ch. Assistant Professor Dr. Nadia Georgieva Daskalova for "Associate Professor" in Professional Field 6.1. Crop production, Scientific specialty "Breeding and seed production of cultivated plants"



Date: 26.10.2021
Plovdiv

PREPARED
THE OPINION: …….
(prof. Dr. H. Kirchev)