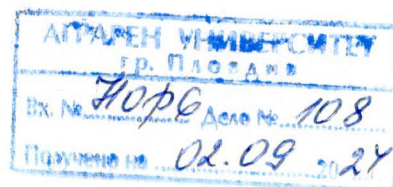


## STATEMENT



on the competition for the position of **professor** in the field of higher education: 4. Natural sciences, mathematics and informatics; professional direction: 4.3 Biological sciences, scientific specialty: Genetics, announced in the State Gazette No. 36 of 23.04.2024.

Candidate: Assoc. Prof. **Bojin Maksimov Bojinov**, PhD, from the Department of Plant Physiology, Biochemistry and Genetics at the Agricultural University - Plovdiv

Prof. Dr. Malgozhata Yan Moetska-Berova, PhD, from the Agricultural University of Plovdiv, appointed according to Order No. RD-16-808/18.06.2024 of the Rector of the Agricultural University - Plovdiv as a member of the scientific jury

### 1. Brief presentation of the candidate

Bojin Maksimov Bojinov graduated from the Agricultural University - Plovdiv in 1990 with an educational and qualification degree "Agronomy". In 1990-1995, he held the position of research assistant for III, II and I degrees at the Field Crops Institute - Chirpan. In 1995, he started working as an assistant at the Department of Genetics and Breeding at the Agricultural University of Plovdiv, where he has continued his professional realization until now. In 2000, after successfully defending a doctoral thesis on the topic: "Study of the possibilities of using in vitro methods in cotton breeding", he obtained a PhD in Breeding (Plant Biotechnology). In 2005 he received the scientific title of Associate Professor in Genetics.

At the same time, from 2008 until now, Assoc. Prof. Bojinov has held several administrative positions at the University of Plovdiv (2008-2016 - Dean of the Faculty of Agronomy; 2016-2020 - Head of the Department of Genetics and Breeding; from 2024 to date - Head of the Department of Plant Physiology, Biochemistry and Genetics). He is a member of the Executive Board of the Scientific Research Fund, Agricultural Sciences sector.

Assoc. Prof. Bojinov participates in the work of the following international organizations: FAO Inter-regional cooperative research network on cotton; International Cotton Genome Initiative (ICGI); European Federation of Biotechnology (EFB); Public Research and Regulation Initiative (PRRI). He speaks English, Russian and French.

### 2. General description of the of the scientific production

The scientific output of Assoc. Prof. Bojinov, including his doctoral thesis and publication activity, meets the requirements for scientometric indicators for the academic position of professor and corresponds to the profile of the announced competition.

Assoc. Prof. Bojinov participated in the competition for the academic position of professor with a total output of **13** works, grouped as follows:

- habilitation work - monograph - **1** item;
- scientific publications in journals that are refereed and indexed in world-renowned databases of scientific information - **12** items;

Assoc. Prof. Bojinov is an independent author of 2 textbooks (General Genetics - 2013 and Innovative Genetics - 2023) and is a co-author of 3 student handbooks (2 exercise manuals in Genetics and 1 book of tests in Biology).

The information on fulfilling the minimum national requirements under Article 2 "b", par. 2, 3 and 5 of the Law on the Development of Academic Staff in the Republic of Bulgaria for scientific field 4. Natural sciences, mathematics and informatics; professional field 4.3. Biological sciences, from Assoc. Prof. Dr. Bojin Maksimov Bojinov forms the following scientific indicators:

group "A" - 50 points; group "B" - 100 points; group „G“ - 207 points; group "D" - 106 points and group "E" - 234.52 points. With a minimum of 600 points for a professor, according to Law on the Development of Academic Staff in the Republic of Bulgaria, Assoc. Prof. Bojinov proves 697.52 pts, exceeding the minimum national requirements.

The distribution of scientific output by quartiles is as follows: 3 publications in Q1, 8 - in Q3 and 1 - in quartile Q4.

### **3. Teaching activity**

Assoc. Prof. Bojinov's teaching experience so far amounts to 28 years and 9 months at AU-Plovdiv. His total academic workload as a teacher in the department for which this competition has been announced (lectures, exercises, extracurricular employment) for 2018-2023 amounts to 2130.7 hours. He delivers with Bulgarian and foreign students of the Bachelor's and Master's degree programs in the following disciplines: General Genetics; Molecular Genetics; Plant Genetics; Genetics and Breeding; Genetic Improvement; DNA Recombinant Technologies; Innovation and Biotechnology; Evolutionary Theory and Species Selection; GMO Legislation, Analysis and Control; Genetic Sources of Pest Resistance; Molecular Genetic Approaches in Plant Protection, Introduction to Agricultural Education. The curricula of the above-mentioned courses were prepared by Assoc. Prof. Bojinov (independently - 10, in co-authorship - 2) and are attached in the materials submitted for participation in this competition. Assoc. Prof. Bojinov is a supervisor of 3 successfully defended PhD students.

### **4. Scientific research activity**

I accept the author's reference prepared by Assoc. Prof. Bojinov for his scientific and applied contributions and the manner of their presentation. They correctly reflect the results of the studies that were conducted.

➤ Scientific and fundamental contributions of an original character:

o A comparative analysis of molecular marker systems (RFLP, SSR, AFLP, ISSR) on their applicability for identification of genetic diversity in different population types was performed - a set of tomato species (publication G3), paulownia (publication G4), interspecific crosses in cotton (publication G1), intraspecific crosses in tomato (publication G12), segregating mutant populations in cotton (publication G9), small-sized populations of indigenous goat breeds (publication G8). The original results of these analyses are compiled in a monograph in English, which is part of the scientific production submitted by the candidate for this competition (Monograph B1).

- o A partial revision of the alignment of the 13 pairs of homologous A/D chromosomes in the  $2n = 4x = 52$  tetraploid cotton genome was made. The major revisions include c3-c17, c4-c22, c5-D08, and c10-c20 homoeologous pairs. They are based on the mapping of 68 SSR and RFLP loci with known chromosome locations, as well as comparative analyses with the alignment of various markers in previously published maps of *G. hirsutum* × *G. barbadense* (publication G1).

- o An integrated genetic map in cotton combining RFLP, SSR and AFLP loci is presented (Publication G1) that can be used as a starting point for other studies.

- o A separate genetic map of Bulgarian cotton accessions has been constructed, grouping markers associated with all fibre traits studied and explaining between 4 and 15% of the total trait variation.

- o An integrated approach for creating new tomato genotypes with increased antioxidant content based on using phenotypic, biochemical and genetic markers has been developed (publication G12).

- o Developed a method for text analysis of internet-based scientific information related to the application of genetic engineering approaches and the comparative performance of their application against non-GE breeding methods to meet the challenges of biotic and abiotic stresses in the EU (publication G6).

- o The genetic profiles of the circulating pathogenic strains of *E. coli* in the entire biotope and different members of the relevant biocenosis have been completed (publication G10).

- Scientific and applied contributions of an original character:

- o A selection system for ISSR markers that can be used to identify genotypes of different species - tomato (publication G3 and G7), paulownia (publication G4), goat (publication G8) – is proposed for implementation.

- o A region affecting several fiber quality characteristics (strength, micronaire and elasticity) simultaneously in Bulgarian cotton samples has been identified (monograph B1).

- o Identified a set of quantitative trait loci in cotton (publications G1 and G9) and tomato (publications G5 and G7).

- o Intra-breed genetic variation in indigenous goat breeds has been identified for the conservation of local genetic diversity, which can be used to develop new breeding programs in goats (publication G8).

- o Ecological epidemiological typing of pathogenic strains of *E. Coli* was performed to control their spread (publication G10).

- o A set of biotechnological approaches for the rapid breeding of promising energy plant species has been proposed for implementation (Publication G2).

A total of 314 citations (refereed and indexed in Scopus) have been noted in the databases, and 53 have been selected for participation in the current competition. The candidate has an *h* factor of 5 (according to Scopus).

## 5. Notes and recommendations

I have no comments or recommendations for the candidate.

## 6. Conclusion

Based on the analysis of the pedagogical, scientific and applied activities, I believe that the candidate Assoc. Prof. Bojin Maksimov Bojinov, Ph.D., meets the requirements of Law on the Development of Academic Staff in the Republic of Bulgaria, the Regulations of the Agricultural University for its application. From the presented reference, it is evident that he is an established specialist in the field of genetics, with opportunities to teach students, with a clear scientific profile and achieved original and applied contributions.

This gives me a reason to evaluate his overall activity **POSITIVELY**.

I would suggest to the Honorable Scientific Jury to also vote positively, and the Faculty Council of the Faculty of Agronomy at the Agricultural University - Plovdiv to choose the candidate Bojin Maksimov Bojinov as a professor in the scientific specialty Genetics.

Date: 04/08/2024  
Plovdiv

PREPARED BY: .....  
(Prof. Dr. Malgozhata Berova)