

STATEMENT

by Assoc. Prof. Silvena Boteva Boteva, Ph. D., Sofia University "St. Kliment Ohridski", elected as a member of the Scientific Jury, appointed by Order № ПД-38-304/10.06.2024 of the Rector of Sofia University "St. Kl. Ohridski"

by competition

for the academic position of *Associate Professor* in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.3. Biological Sciences (Physiology of Plants - Symbiotic Interactions in Plants), announced in the State Gazette, issue 32 of 09.04.2024. by Sofia University "St. Kl. Ohridski"

General part

Dr MARIETA GEORGIEVA HRISTOZKOVA, Ph. D., Senior Assistant Professor at the Department of Plant Physiology, Faculty of Biology, Sofia University "St. Kl. Ohridski" is the only candidate in the competition for the academic position of *Associate Professor* by 4.3 Biological Sciences (Plant Physiology - Symbiotic Interactions in Plants). The submitted materials follow the requirements of the Academic Staff Development Act in the Republic of Bulgaria (ASDA), the Regulations for the Implementation of ASDA, the Regulations for the Conditions and Procedure for the Acquisition of Scientific Degrees and for the Occupation of Academic Positions at Sofia University "St. Kl. Ohridski". The competition documents are well structured and comprehensively reflect the research, project and teaching activities of the candidate.

Biographical information

Marieta Georgieva Hristozkova graduated from Sofia University "St. Kl. Ohridski" in 2008 by successfully defending her PhD thesis in the professional field 4.3. Biological Sciences, scientific specialty Plant Physiology, with topic entitled "Influence of molybdenum deficiency on nitrogen uptake in nitrogen-fixing plants pea and alfalfa. Investigation of the general stress response in *Sinorhizobium meliloti* under nitrogen and carbon starvation", at the Bulgarian Academy of Sciences - Institute of Plant Physiology, Section "Mineral nutrition and water regime".

Dr. Marieta Hristozkova worked as a specialist biologist from 2002 to 2004 and from 2007 to 2008 at the Bulgarian Academy of Sciences - Institute of Plant Physiology and Genetics, Section: Mineral Nutrition and Water Regime of Plants. From 2008 to 2018 she held the position of Senior Assistant at the same Section. In this period she has completed two specializations, in France and Germany, in 2005 and 2007-2008, respectively. Since 2018 until present, she has been working as a Senior Assistant Professor at the Department of Plant Physiology, Faculty of Biology, Sofia University "St. Kl. Ohridski".

Research activities

The scientific research activity of Senior Assistant Professor Marieta Hristozkova corresponds entirely to the scientific specialization of the habilitation competition - Plant Physiology - Symbiotic Interactions in Plants. The main research fields in which the candidate's contributions are outlined are three. The first is in the area of beneficial plant-microbe interactions in plants, involving the effects of arbuscular mycorrhizal fungi on plant development and symbiotic nitrogen fixation in legumes. The second scientific field is the influence of abiotic stress conditions on plant development, and here the contributions are in sub-directions related to the effect of salt stress and overcoming its negative consequences in plant development, and the quality of production obtained from medicinal and aromatic plants grown on industrially polluted soils with heavy metals and the possibilities of their use for phytoremediation. The third research field is related to methods for quality improvement and evaluation of antioxidant activity of medicinal and aromatic plants, in particular the study of antioxidant activity of in vitro propagated, compared to seed-grown or wild medicinal and aromatic plants. All the contributions in the respective fields are supported by scientific articles, with the publication activity being the largest (7 articles) in the field of studying the effects of nitrogen foliar fertilization with Agroleaf® (0.3%) in pea and alfalfa, leading to overcome the negative effects of Mo starvation in terms of nitrogen fixation and nitrogen assimilation efficiency, as well as plant biomass accumulation.

Assessment of the applicant's compliance with the mandatory conditions and the mandatory quantitative criteria and science metrics

In the competition for *Associate Professor*, Dr. Hristozkova has submitted 27 scientific articles and one book chapter. One of these articles has been submitted to the NACID to meet the criteria for the award of the PhD and it is accordingly not included in the further commentary on the submitted documentation. The total impact factor of the articles is 25.25, and their number is 15. A further 8 articles without an impact factor but with an SJR, and three articles without an impact factor and an SJR are attached. A total of 29 articles and one book chapter with a total of 396 citations are presented, 223 of them in SCOPUS. The candidate's scientific works confirm her activity and prospects for future development. This is complemented by Dr. Hristozkova's participation in 6 national and 3 international research projects.

In summary, the science metrics presented under the RRBA and the RRBAAP, under Area 4. Natural Sciences, Mathematics and Informatics, Professional field 4.3. Biological Sciences, in sub-categories, are as follows:

1. According group indicators "A" Successfully defended dissertation for the award of PhD - (50 points out of the required 50 points)
2. According group indicators " B.4" - Habilitation thesis or scientific publications in publications that are refereed and indexed in world-known databases with scientific information (Web of Science and Scopus). There are 5 publications with a total impact factor of 14.911, of which 3 with Q1 and 2 with Q2 (total 115 points out of the required 100 points). In three of them the candidate is the first author, in one the second which is a proof of her activity and contribution in the scientific works.

3. According group indicators "Г" - Scientific publications outside the habilitation thesis in publications that are refereed and indexed in world-renowned databases, 18 publications are presented, of which with rank Q1 - 1; Q2 - 5; Q3 - 9; Q4 - 3, in eight of which is the candidate is first author. One book chapter has been added to the competition asset (311 out of the required 200 points).

4. According group indicators "Д" - Citations in scientific publications, monographs, collective volumes and patents, refereed and indexed in world-known databases with scientific information - a total of 396 citations were presented, 223 of which in SCOPUS (total 446 points out of the required 50 points).

I accept the fulfilment of the minimum national requirements under Article 2b of the RRBA for the scientific field and the professional field 4.3. Biological Sciences (Plant Physiology - Symbiotic Interactions in Plants), in which Dr Marieta Hristozkova exceeds the points in indicators B, Г and Д.

Teaching activity

Senior Assistant Professor Marieta Hristozkova has a high teaching workload, which averages 540.6 hours of total and 360 hours of classroom work per year for the last five years. The main workload is formed by the lecture course in the compulsory subject of Plant Physiology for the specialty Biomangement and Sustainable Development, practical classes in the same subject for the specialties Biology and Molecular Biology, as well as lectures and practical classes in the elective course Superfoods of Plant Origin for the specialties Molecular Biology, Biology and Chemistry, and Biology and English.

She has been a research advisor for three successful graduate students in the Biology Department.

In conclusion,

The present candidature fulfils and even significantly exceeds the mandatory conditions and scientific criteria for the academic position of "Associate Professor".

Considering the above opinion on the professional scientific research and teaching activity of the candidate, I will vote positively and accordingly recommend to the Honorable Members of the Scientific Jury appointed by Order № ПД-38-304/10.06.2024 of the Rector of Sofia University "St. Kliment Ohridski" to propose to the Faculty Council of the Faculty of Biology, Senior Assistant Professor MARIETA GEORGIEVA HRISTOZKOVA, to be elected to hold the academic position of Associate Professor in Professional Field 4.3. Biological Sciences (Plant Physiology - symbiotic interactions in plants).

I have the following questions to the candidate:

1. How do the knowledge and skills acquired during her internships abroad and her participation in national and international projects find application in the teaching and learning process?

2. How does she see her further development in the Department of Plant Physiology - will she continue to develop the same areas and/or will she develop others?

Sofia

Assoc. Prof. Dr. Silvena Boteva, Ph. D.

19.07.2024