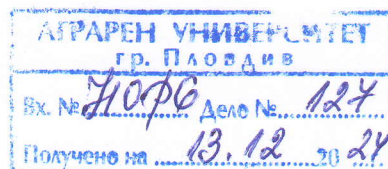


STANDPOINT



Subject: Competition for the academic position of "**associate professor**" in the field of higher education 6. *Agricultural Sciences and Veterinary Medicine*; professional field 6.2 *Plant Protection*; scientific specialty *Plant Protection*, announced in the State Gazette, issue 69/16.08.2024 by the Agricultural University-Plovdiv

Candidate for participation in the competition: Assistant Professor Mariana Krasimirova Petkova PhD from the Agricultural University - Plovdiv

Standpoint by: Assoc. Prof. Vinelina Panayotova Yankova-Mihaylova, PhD from the "Maritsa" Vegetable Crops Research Institute - Plovdiv, higher education area 6. *Agrarian Sciences and Veterinary Medicine*; professional field 6.2 *Plant Protection*; scientific specialty *Plant Protection*, appointed as a member of the scientific jury according by order No. RD 16-1186/22.10.2024 of the Rector of the Agricultural University - Plovdiv

1. Brief presentation of the candidate.

Assistant Professor Mariana Krasimirova Petkova PhD has graduated the Agricultural University - Plovdiv (AU-Plovdiv) in 1997, with a Master's degree in Plant Protection. In 2002, she has obtained an educational and scientific degree "Doctor" of Molecular Biology at the University in Kobe, Japan. In 2010, she was appointed as an assistant in the AU - Plovdiv, and from 2011 to the present, she has been a senior assistant professor. She is fluent in English and Russian, and mainly in Japanese and Italian. She has technical skills and competencies in the fields of microbiology, molecular biology, chromatographic methods for analysis and protein biochemistry. She has attended the following courses to improve her qualifications: "Cloning and functional analysis of hACF1 and hSNF2h involved in chromatin remodelling" in Osaka, Japan, Faculty of Pharmacy, Department of Protein Biochemistry; HPLC Training at Regional Training Course on Standardisation of Techniques for Quality Evaluation of Solanaceous Food Crops, Budapest, Hungary; Scholarship from the Norman Borlaug Foundation at North Dakota State University, Institute of Sunflower Genetics and Breeding and Plant Biology, topic of scientific work: "Genetics and Biochemistry of Rapeseed"; "Food Traceability Technologies Based on DNA Analysis and Genomics" course, held at the Institute of Applied Biosciences - INAB, Centre for Research and Technology in Thessaloniki, Greece; Training seminar on the topic "Modern analytical approaches for ensuring the quality and safety of food, beverages and feed" at the University of Food Technology - Plovdiv

2. General description of scientific production.

In the competition for "associate professor", assistant professor Mariana Krasimirova Petkova PhD participated with 48 papers totally, grouped as follows:

✓ *Publications related to the doctoral dissertation – 4 issues, which are not subject to review;*

✓ *Publications for an assistant professor – 4 issues, which are not subject to review;*

- ✓ *Scientific publications in journals that are refereed and indexed in world-renowned databases of scientific information – 10 issues;*
- ✓ *Articles and reports published in scientific publications, refereed and indexed in world-renowned databases of scientific information – 23 issues;*
- ✓ *Articles and reports published in non-refereed journals with scientific review or published in edited collective volumes – 7 issues.*

For the preparation of the opinion, 40 items are subject to analysis.

The report on the implementation of the minimum national requirements forms the following scientometric indicators: group A – 50 points; group B – 119.5 points; group G – 256.8 points; group D – 705 points. The required minimum of 400 points according to the Regulations on the implementation of the Development of Academic Staff in the Republic of Bulgaria Act (DASRBA), assist. prof. Mariana Petkova PhD shows 1131.3 points, which significantly exceeds the minimum national requirements. The distribution of scientific production by quartiles is as follows: Q1 – 3 publications; Q2 – 7 publications; Q3 – 3 publications; Q4 – 5 publications. Total IF 34,66. Forty-seven citations are presented in scientific publications, referenced and indexed in world-renowned databases with scientific information. Assist. prof. Mariana Petkova PhD participated in 13 scientific research projects during the period from 2011 to 2020.

The scientific works of assist. prof. Mariana Petkova PhD are published mainly in scientific journals (36 issues) and 4 articles are in collections of scientific forums. Publications in English predominate, in refereed and indexed scientific publications in world-renowned databases. This allows the scientific works to be read and cited by a wide range of specialists.

The personal participation of assist. prof. Mariana Petkova PhD in the mentioned 40 scientific works is as follows: in 1 of the publications she is an independent author, in 18 of the publications she is the first author, in 9 of the publications she is the second author and in the remaining 12 she is the third and subsequent author. The co-authored publications are proof of her ability to work in a team and to analyse the problems in the field of microbiology and plant protection in a comprehensive manner.

3. Teaching activity

Assistant professor Mariana Petkova PhD has 14 years of experience as a lecturer at the Agricultural University - Plovdiv. The issued certificate for her total teaching workload as a lecturer at the AU - Plovdiv for the period from 2019 to 2024 amounts to 2097.3 hours. She gives lectures and exercises to Bulgarian and foreign students from the Bachelor's and Master's degree programs.

Assistant professor Mariana Petkova PhD leads exercises in the “Microorganisms for plant protection” discipline for students of the Master's course "Plant Medicine" full-time education in English 15 hours 2022.

4. Research activity.

The research activities and achievements of assistant professor Mariana Petkova PhD are in the fields of microbiology, molecular biology, biochemistry and plant protection. The research has been conducted in three main areas:

- ✓ Molecular identification, biochemical characterization and *in vitro* study of the antimicrobial activity of beneficial microorganisms (lactic acid bacteria, yeasts, entomopathogenic fungi of the *Beauveria* genus) against phytopathogens and pests.
- ✓ Studying the influence of the tested beneficial microorganisms on the

growth and development of plants with the aim of their application as biofertilizers in agriculture.

✓ Application of next-generation sequencing to study the microbiome of different soils and compost.

I accept the report prepared by assist. prof. Mariana Petkova PhD on the scientific and applied scientific contributions and their presentation. They show the results of the experiments and studies conducted. The candidate's scientific achievements are presented in scientific publications, posters and reports from scientific forums.

The noted citations in the literature on scientific publications are 121, of which 86 in journals with an impact factor, 33 in peer-reviewed journals without an impact factor and 2 articles are cited in doctoral themes. The large number of citations is evidence of the relevance of the problems on which assist. prof. Mariana Petkova PhD works.

5. Remarks and recommendations.

I have no critical remarks. My recommendation to the candidate is to work and publish more materials related to microbial plant protection products, which in recent years have occupied an increasingly important and central place in plant protection schemes.

6. Conclusion.

Based on the analysis of the candidate's pedagogical, scientific and scientific-applied activities, I believe that **Assistant professor Mariana Krasimirova Petkova PhD** answers the requirements of the DASRBA, RIDASRBA and the Regulations of the Agrarian University for its implementation. The submitted reference shows that the candidate is a well-established specialist in the field of microbiology, molecular biology, biochemistry and plant protection with the ability to train students and achieved scientific results.

All this gives me a reason to evaluate her complete activity **POSITIVELY**.

I would like to propose to the honoured Scientific Jury to also vote positively, and the Faculty Council of the Faculty of Plant Protection and Agroecology at the Agricultural University - Plovdiv to elect **Assistant professor Mariana Krasimirova Petkova PhD** as "Associate Professor" in the scientific specialty Plant Protection.

Date: 11.12.2024

Plovdiv

PREPARED THE

STANDPOINT: 

(assoc. prof. Vinelina Yankova PhD)