



## OPINION

**on the competition for academic position "Associate Professor"  
in the scientific specialty Plant Protection (Entomology), announced in the  
State Gazette No. 97 of 21.11.2023. with only one candidate - Chief assistant,  
Dima Mateeva Markova,**

**written by prof. Radoslav Andreev Andreev, PhD,**

**determined according Order No RD 16-47/22.01.2024 of the Rector of the  
Agricultural University – Plovdiv for Chairman of the Scientific Jury.**

### **1. Brief presentation of the candidate.**

**Dima Mateeva Markova** was born on 24.04.1982 in Plovdiv, where she completed her secondary education. During the period 2000-2004 she studied and graduated as a Bachelor in "Plant Protection" at the Agricultural University – Plovdiv. In 2005 she graduated as a Master's degree in "Ecology of Urban Systems". From 2006 to 2010 she was consecutively 3rd and 2nd degree Researcher at Maritsa Vegetable Crops Research Institute (MVCRI), Plovdiv, department of Vegetable Production Technology. Since 2010 he has been an assistant and since 2011 he has been a chief assistant in the same department. At that time, Dima Markova developed a dissertation on the topic: „Gall nematodes of the genus *Meloidogynae* Goeldi on potatoes in Southern Bulgaria“ under the scientific guidance of prof. Harry Samaliev. In 2015 she acquired the educational and scientific degree "PhD" in the scientific specialty "Plant Protection (Entomology)". Until 2020, she continued to work in MVCRI, after which she started working as Chief Assistant at the Department of Entomology at the Agricultural University of Plovdiv.

She has had two specializations.: in 2015 at Akdeniz University, Antalya, Turkey - "Identification of root-knot nematodes using molecular techniques and marker assisted selection of resistance genes using molecular markers in vegetables" and in 2018 under the Erasmus + program, at Polytechnic University Barcelona, Spain.

She is fluent in English and Russian.

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

In the competition for "Associate Professor" Dima Markova participated with a total production of 25 scientific papers, grouped as follows:

- ❖ *Scientific publications in the nomenclature specialty – 61 issues, of which:*
  - *Publications related to the doctoral dissertation – 4 issues that are not subject to consideration;*
  - *Publications with impact factor (IF) and SCImago Journal Rank (SJR) – 12 issues;*
  - *Publications in peer-reviewed and refereed scientific journals – 19 issues;*
  - *Publications in conference proceedings – 15 issues;*

The personal participation of the candidate in these publications is illustrated by the fact that in 5 of them she is first, in 27 – second, in 17 - third and in the rest she is the fourth and next author.

- ❖ *Study and practical guides (technologies) – 2 pieces.*
- ❖ *Publications in popular science magazines – 16.*



*For the preparation of the opinion 61 papers are subject to analysis.*

### **3. Teaching activities.**

As a specialist – nematologist Chief Assist. Dima Markova gives mainly lectures and exercises in the disciplines „Non-insect pests“ and „Agricultural acarology and nematology“ respectively in the bachelor's and master's courses of the faculty of Plant Protection and Agroecology. In the bachelor's courses of agronomic specialties she brings out practical exercises in "General Entomology", "Special Entomology" and "Pests of Agricultural Crops". She is charged with the guidance of a master's course; manages graduates; participates in national and international projects. From April 2021, when she was appointed full-time Chief Assist in the Department of Entomology, Dima Markova has two years and nine months of teaching experience, which meets the requirements of the Law on the Development of Academic Staff and the Regulations for its application in AU.

#### *Applicant's study employment.*

From 2019/2020 to 2022/2023 academic year Chief Assist. Dima Markova has a total of 1384.7 hours of workload, which includes lectures, seminars, exercises, teaching practices and extracurricular activities (current control, exams, graduates, participation in committees). Over the past two years, its workload has averaged about 500 hours, with a norm of 360. The teaching activity is complemented by the management of 5 successfully defended graduates.

#### *Published teaching materials.*

As Chief Assist. at MVCRI Dima Markova has participated in the development of two Practical Guides (technology) for farmers: „Organic production of seedlings – tomatoes and cucumbers“ and "Technologies for the production of vegetable crops and potatoes".

#### *Developed teaching programmes.*

She has developed the entomological part of the curriculum in the discipline „Diseases and Pests in the Green System“, which is taught jointly with the dept. of Phytopathology and is studied by students in the specialty "Ecology and Environmental Protection".

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

#### *Areas of publication.*

The research activity of Chief Assist. Dima Markova is directed in the following directions:

- Assessment of the susceptibility response of different varieties, specimens and lines of vegetable crops, potatoes and rice to plant-parasitic nematodes, in relation to resistance selection;
- Study of alternative methods for the control of plant-parasitic nematodes;
- Determination of the species composition and population dynamics of the main pests and beneficial species in agroecosystems in vegetable crops;
- Study of the efficacy of new plant protection products against pests in outdoor vegetables and cultivation facilities;
- Development of integrated and organic plant protection systems for the protection of vegetable crops from pests.
- Development of technology for growing *Tribulus terrestris* L. as a semiculture and establishing the pests;



- Study of the influence of water deficiency on growth performance and foe attack in pepper mutant lines.

*Citation and referencing of scientific production.*

On the scientific production of Chief Assist. Dima Markova has seen a total of 55 citations of 13 of her publications. To meet the minimum state requirements in Group D, only 4 of them are sufficient, which are published in scientific journals, referenced and indexed in world-famous databases of scientific information (Scopus and Web of science).

*Participation in scientific projects.*

Chief Assist. Dima Markova is extremely active in the development of scientific projects. She has participated in the teams of 24 national scientific projects – 14 funded by the SAA and 10 by the NSF to the Ministry of Education and Science. He has participated in 3 international projects funded by the EU and the International Atomic Energy Agency.

**5. Remarks and recommendations.**

- She has not published any independent articles yet..
- To consider writing (alone or in co-authorship) of teaching materials in the disciplines taught at AU.

**6. Conclusion.**

Based on the analysis of the pedagogical, scientific and applied activities of the candidate, I believe that Chief Assist. Dima Markova meets the requirements of the Law on the Development of Academic Staff and the Regulations for its application. The scientific-metric criteria of the candidate are quite sufficient, and according to some of the indicators they exceed the requirements for obtaining the title "Associate Professor". She is a longtime researcher and currently a lecturer in the cat. Entomology and has gained considerable research and now teaching experience. She participates in a large number of national and international scientific projects. Her scientific production is published in authoritative journals, some of which have IF, and the interest in it is proven by the large number of citations. In the most authoritative databases, such as Web of Science and Scopus, she has a calculated h-index. As soon as she came, she joined the team of the Department of Entomology and was elected secretary. For the time we know her. Dima Markova proved to be a modest, friendly, polite and very hardworking person and colleague. I believe that she will be one of the leading figures in the future development of the Department of Entomolgy.

All this gives me a reason to evaluate POSITIVELY his overall activity and I suggest to the venerable Scientific Jury to choose **Dima Mateeva Markova** as "Associate Professor" in professional field 6.2. Plant Protection in the scientific specialty Plant Protection (Entomology) at the department of Entomology at Agricultural university - Plovdiv.

Date: 11.03.2024.  
Plovdiv

**PREPARED OPINION:**

(Prof. Radoslav Andreev)