



TRAKIA UNIVERSITY, FACULTY OF AGRICULTURE

О P I N I O N

By: **Assoc. Prof. Angel Ivanov Pavlov, Ph.D.**

Doctoral Degree Program: *Ecology and Ecosystems Protection*; Professional Field 4.3. *Biological Sciences*, Area of Higher Education 4.0. *Natural Sciences, Mathematics, and Informatics*,
Department: Pharmacology, Physiology of the Animals, and Physiological Chemistry
at the Faculty of Veterinary Medicine, Trakia University, Stara Zagora;

Regarding: procedure for the academic position **Full Professor** in Ecology and Ecosystems Protection, Professional Field 4.3. *Biological Sciences*, Area of Higher Education 4.0. *Natural Sciences, Mathematics, and Informatics* at the Faculty of Agriculture of Trakia University, Stara Zagora

1. Information about the procedure

The procedure has been announced for the needs of the Department of Biology and Aquaculture, Faculty of Agriculture at Trakia University in the **State Gazette** issue **30** dated **13 April 2021**. I have been appointed a member of the Academic Jury for this procedure by **Order № 1499** from **18 June 2021** issued by the Rector of Trakia University, Stara Zagora.

2. Brief information about the Candidate in the procedure

Assoc. Prof. Katya Naneva Velichkova, Ph.D. is the sole candidate in the announced procedure. She has graduated from the Hristo Botev Secondary School in Stara Zagora in a biology-oriented class. She pursued her higher education at Plovdiv University Paisii Hilendarski, from which she graduated in 1999 with a Master's degree in Biology and Chemistry. Her work career started as a Biology teacher in the village of Vetren and after that she worked as a part-time lecturer in Biochemistry at the Faculty of Veterinary Medicine, Trakia University. In 2004 she enrolled in the Doctoral degree program offered by the Department of Biology and Aquaculture, Faculty of Agriculture, Trakia University. In 2008, after the successful defense of her dissertation, she received a Doctoral degree. Afterwards, Dr. Velichkova worked for six months as a part-time lecturer of Plant Systematics at the Faculty of Biology at Plovdiv University Paisii Hilendarski. That year she was appointed Assistant Professor by the Department of Biology and Aquaculture, Faculty of Agriculture, Trakia University. Since 2010 she has been holding title Senior Assistant Professor. In 2015 Dr. Velichkova was granted the academic rank of Associate Professor. Since 2020 she has been undertaking the administrative role of Vice Dean for Academic Affairs at the Faculty of Agriculture, Trakia University.

3. Eligibility for faculty position

Eligibility according to Appendix 8.1.

The Candidate meets all national minimum eligibility requirements for the academic position Full Professor of Ecology and Ecosystems Protection; Professional Field 4.3. Biological Sciences;

Area of Higher Education 4.0. Natural Sciences, Mathematics, and Informatics, including the requirements for the criteria regulated by Appendix 8.1. of the Development of Academic Staff Act of Trakia University. She not only meets but even exceeds the minimum required score for some of the more important assessment indicators - G, D, and E.

4. Evaluation of the candidate's teaching experience

The Candidate has fifteen years of teaching experience. She has taught lectures and seminars in the disciplines Hydrobotany and Hydrobiology as part of the Fishery and Aquaculture major. Dr. Velichkova has taught lectures and seminars in Plant Physiology as part of the Agronomy major program; Essential Oil Cultures, Ecology and Environmental Protection (EEP), Agricultural Engineering; lectures and seminars in Botany as part of the Agriculture major, Essential Oil Cultures, EEP, and Zooengineering. Gives lectures in Protected areas to Master students in EEP.

She teaches lectures and seminars in English language instruction in Medical Botany as part of the Veterinary Medicine major. She also teaches a Biology course to foreign students. Dr. Velichkova teaches a seminar in Botany to first year students of Ecology and Environmental Protection.

She participates in the design and development of teaching programs in Hydrobotany, Plant Physiology, Green Infrastructure and Territorial Systems as part of the Ecology of Rural Systems Master's degree program. She has also developed e-courses for the disciplines Plant Physiology, Hydrobotany, Hydrobiology, Botany, Medical Botany, and Protected Areas.

The published Practical Study Guide and Textbook in Hydrobotany, authored by Dr. Velichkova, are unique for our country.

From the submitted documents it is clear that Assoc. Prof. Velichkova, Ph.D., is actively involved in the students' extracurricular activities by supervising tens of students which have successfully defended their theses. She has advised both: Radoslav Koshinski, a doctoral candidate who has successfully defended his dissertation, and Svetoslava Terzieva, a doctoral candidate who has been admitted to a doctoral defense. Dr. Velichkova is a regular participant in many scientific forums in the country and abroad.

She chairs the Commission for Academic Accreditation and Educational activities. She is member of the Ecology Methodical Council and member of the State Examination Board for the Bachelor's degree program in Fishery and Aquaculture.

5. Brief overview of the submitted scientific papers/publications

In the announced procedure for obtaining the title Full Professor, Assoc. Prof. Katya Velichkova, Ph.D. participates with a total academic production of 30 scientific papers, 7 of which are related to her habilitation treatise *Phytoremediation and bioaccumulation qualities of the species of the Lemna (Lemnoideae) genus*, 2021, ISBN: 978-619-7329-65-0. Out of the remaining 23 papers from group **G**, 6 are reports from national and international conferences, and 17 have been published in specialized, referenced, and indexed journals in the world renown databases Web of Science and Scopus. The total score for this group is **232 points** with minimal national requirement of 200 points.

With respect to the group of indicators **D** (Citations in scientific journals, monographs, volumes of collected works and patents, referenced and indexed in world renowned databases with scientific data (Web of Science and Scopus)), the Candidate has indicated 73 citations, which gives a total of **146 points** with minimal required score of 100 points.

Of the group of indicators **E** (2. Advising of a doctoral student who has successfully defended their thesis. 3. Participation in a national scientific or educational project. 7. Publishing of a university textbook or a textbook used in the school network.), the Candidate has gathered a total of **200 points** of the minimal required score of 150 points.

6. Short evaluation of the core scientific and scientific and applied contributions of the Candidate

In her habilitation treatise *Phytoremediation and bioaccumulation qualities of the species of the Lemna (Lemnoideae) genus*, Dr. Velichkova has made several original contributions and many of applied nature. The possibility for combined application of microalgae for wastewater treatment and their subsequent use as a feed source in aquaculture is a promising direction for future research, and the studies should be expanded further.

The Candidate's scientific research is complex and focused on four main directions, which I will try to give a brief overview of:

- Taxonomy studies and establishing of new species in the Bulgarian flora (publications: 11, 18, 23, and 24), several original contributions have been made;
- Monitoring studies (publications: 8, 10, 14, 26, 30), several original contributions and one of applied nature;
- Cultivation of microalgae for the synthesis of biomass and treatment of wastewater from aquaculture (publications: 9 and 12), two contributions of applied nature have been made;
- The use of plant extracts, symbiotics for antimicrobial activity, improvement of hydrochemical, growth, and biochemical blood parameters, and improvement of the quality of meat (publications: 13, 17, 20, 21, 29) all with original contributions.

Main critical notes and recommendations

- 1) I recommend that the Candidate deepen and expand her research on the use of microalgae for tackling fundamental ecological problems, such as the treatment of wastewater, and
- 2) Continue her publication activity in renowned scientific journals, included in the world databases Scopus and Web of Science.

7. Conclusion

The submitted complete body of published scientific and teaching work of the Candidate points at a targeted research with real contribution to theoretical science, applied science, and the teaching of students. The Candidate's scientific research results have been published in leading national and foreign indexed scientific journals and have multiple citations in the international databases Scopus and Web of Science.

The Candidate meets the minimum national eligibility requirements, as well as all additional criteria, established in the Development of Academic Staff Act of Trakia University for the academic position Full Professor within the Professional Field 4.3. *Biological sciences*.

In my capacity as a member of the Academic Jury I hereby give a positive evaluation to the Candidate and give my RECOMMENDATION to the esteemed members of the Jury of the Faculty Committee, Faculty of Agriculture, 'FOR' granting the academic rank Full Professor to Assoc. Prof. Katya Naneva Velichkova, Ph.D. in the Scientific Field of Ecology and Ecosystems Protection, Professional Field 4.3. *Biological sciences* for the needs of the Department of Biology and Aquaculture, Faculty of Agriculture, Trakia University, Stara Zagora.

30 July 2021
Stara Zagora

Signature. 
/Assoc. Prof. Angel Pavlov, Ph.D./