



OPINION

on the materials submitted for participation in a competition for „Associate Professor“ in the field Agriculture and Veterinary medicine, Professional field 6.5 Forestry, scientific specialty Forest melioration, protection of forest and special forests uses, in the discipline Soil science and basics of fertilization

In the competition for Associate Professor, published in the State Gazette 28 /01.04.2025 and on the site of the University of Forestry on 17.03.2025 with the code FOR-AsP-0325-162 for the needs of the Department of Silviculture at the Faculty of Forestry as a candidate participate Kamelya Georgieva Petrova Faculty of Forestry, Department of Silviculture

Prepared the opinion: Biser Emilov Hristov, Ph.D., Professor in a Professional Field 6.1 Plant breeding, in the discipline Soil Science at University of Forestry.

1. Brief biographical data for the candidate

Kamelia Georgieva Petrova was born in the city of Sliven in 1987. She graduated from the University of Forestry - Sofia in 2014 and obtained a Master's degree, Forestry Engineer, specialization "Forest Management". Since 2016, she has been an assistant in the discipline "Forest Soil Science" in the Department of Soil Science, Faculty of Forestry at the University of Forestry. In 2020, she defended her dissertation on the topic "Updating the Classification of Soils from the Territory of the *Petrohan* University Forestry field". From September 2020 to the present, she has been a Chief Assistant Professor in the Department of Silviculture (until 2023, Department of Soil Science).

2. Correspondence of the submitted documents and materials of the applicant according to the Rules of the Development of academic staff at the University of Forestry.

According to the requirements of the Regulations on the conditions and procedure for acquiring a scientific degree and for occupying academic positions at the University of Forestry, Senior Assistant Professor Dr. Kamelya Petrova has submitted the necessary documents for participation in the competition. The total number of points is 554 with 400 points required. The distribution of the respective number of points by individual indicators is as follows: indicator A - 50 points with 50 points required; indicator B - 202 points with 100 points required; indicator D - 212 points with 200 points required; indicator E - 90 points with 50 points required.

3. Assessment of the candidate's educational and pedagogical activities (work with students and PhD students)

From the submitted report on classroom and extracurricular employment, it is impressive that the candidate annually fulfills and exceeds the individual employment standard. Assistant Professor Kamelya Petrova leads a lecture course and exercises in the discipline "Soil Science with Fundamentals of Fertilization" with students from the specialty Landscape Architecture, full-time education in the academic years 2022/2023, 2023/2024 and

2024/2025. She also leads a lecture course in the discipline "Soil Science" with students from the specialties Agronomy and Plant Protection, part-time education for 2023/2024 and 2024/2025. Head of practice in "Soil Science with Basics of Fertilization" for the specialty Landscape Architecture, 1st year, full-time study, Master's Degree for the academic years 2020/2021, 2021/2022, 2022/2023, 2023/2024, 2024/2025.

Assistant Professor Kamelia Petrova supervises a graduate student and writes reviews of theses at the Forestry University.

4. Assessment of candidate's scientific, scientific-applied and publishing activities

General description of the presented materials

Candidate Kamelya Petrova participated in the competition with:

- Publications - 27 number (s).
- Projects - 12 numbers (s).

4.1 Participation in scientific, scientific-applied and educational projects

Assistant Professor Kamelya Petrova leads 3 projects at NIS-LTU, participates in another 7 scientific projects at NIS-LTU. She participates in 4 scientific projects at FNI-MON and one educational project funded under the Operational Program "Science and Education for Smart Growth". Kamelya Petrova participates in the project "Assessment and Monitoring of the Impact of Atmospheric Air Pollution on Forest Ecosystems - Level I and II" (large-scale and intensive monitoring), which has been running for nearly 40 years. She also participates in a scientific network, as an associate advisor at the World Association for Soil and Water Conservation (WASWAC). In 2018, she specialized at Alice Holt Lodge, UK - Institute for Forest Research. She is an editor of the Bulgarian Journal of Soil Science, where she reviews.

4.2 Characterization of published scientific results

General description of the submitted materials

The candidate, Senior Associate Professor Dr. Kamelia Georgieva Petrova, participated in the competition with:

27 scientific publications, of which:

Publications in scientific journals:

- Publications in journals indexed in Web of Science or Scopus – 27 or all submitted publications;

Place of publication:

- Articles in foreign journals and collections - 4;
- Articles in national journals - 23;

Language in which they were published:

- In Bulgarian - 2;
- In a foreign language - 25;

Number of co-authors:

- Independent - 2;
- With one co-author - 6;

- With two co-authors - 11;
- With three or more co-authors - 8.

The submitted publications, 25 are in English, and the remaining 2 are in Bulgarian. All publications are in scientific journals, referenced and indexed in world databases: Ecologia Balkanica, Forestry ideas, Bulgarian Journal of Agricultural Science, Bulgarian Journal of Soil Science, Journal of Balkan Ecology, Edelweiss Applied Science and Technology and Forest Science. Publications in SGEM and BIO Web of Conferences are in conference proceedings with SJR (publications G7_7, G7_8 and G7_15).

4.3 Reflection of Candidate's Scientific Publications in Literature (known citations)

- Total - 6 citations.

By type of citations:

- In reference journals and proceedings of scientific forums - 6 citations;
- In teaching aids, monographs, dissertations, etc. - 0 citations.

4.4 Contributions to the candidate's work (scientific, scientific-applied, applied)

I accept the grouping of scientific, scientific-applied and applied contributions made by the candidate. I consider the following of them to be more important:

1. Coefficients for the accumulation of heavy metals were obtained, which represent quantitative values of the natural accumulation of heavy metals in the surface soil layers of Cambisols. The maximum values of the coefficients for Mn, Pb, Cu, Zn and Cd were calculated. (B4_1).
2. For the first time on the territory of the Vitosha Nature Reserve, an IntEro model was applied to study the risk of erosion processes for the Vladayska River catchment basin (B4_9).
3. For the first time, basic soil parameters were studied that have a direct relationship with the growth and development of the fruiting bodies of the common black summer truffle (*Tuber aestivum* Vittad.) on the territory of Western Bulgaria. An assessment of the soil parameters of the soils in which the largest reserves of fruiting bodies were established was carried out and compared with those in which their quantity was the smallest (G7_9 and G7_14).
4. Basic soil parameters of soils of the Cambisols class on the territory of Pirin, Vitosha and Stara Planina were studied in order to establish relationships with the proven growth depression of spruce plantations (B4_10).
5. For the first time in Bulgaria, the initial stage of the podzolization process, occurring in brown forest soils formed under the influence of a deciduous plantation of common beech (*Fagus sylvatica* L.) on the territory of the Petrohan State Forest Reserve (G7_1).
6. An approach is proposed for studying data obtained in relation to the study of relationships in the system "soil-soil microorganisms-wood composition", using GIS (G7_10).
7. Detailed microbiological studies of soils of the Cambisols class on the territory of the Vitosha Nature Reserve were carried out for the first time. For the purpose of the analyses, a correlation dependence between environmental factors on soil biogenicity was calculated. A

strong correlation dependence was established between the change in altitude and the microbial abundance of the studied soils (G7_6; G7_7 and G7_8).

8. An innovative study was conducted on the catalase activity of microorganisms that develop in MGP and soils on the territory of the Vitosha Nature Reserve. It was established that this relationship is more pronounced in broadleaf plantations compared to that obtained in soils formed by conifers (G7_11).

5. Assessment of the applicant's personal candidate

The relevance and contributions of the developments presented by the candidate in the competition are undeniable, because they enrich research in the field of soil science. Assistant Professor Kamelya Petrova is presented with 2 single publications and 6 with one co-author. In publications with more co-authors, I believe that the candidate's participation is equivalent. I have joint publications with the candidate, and I can confirm that she always actively participates in summarizing the data and writing them, therefore she is a desired co-author in various thematic publications. Only two of the publications are in Bulgarian and all the others are in English, which is a good certificate for the importance of the published materials. All this gives me the right to assess the candidate's contributions as undeniable.

6. Critical remarks

I have no critical remarks towards the candidate. I recommend shorter and clearer contributions and candidate have to write single publication and more in international journals with an impact factor. I recommend that the candidate needs to focus on writing monographs, textbooks and manuals.

7. Personal impressions

I have known assistant professor Kamelia Petrova for several years, and I can say that she is developing very quickly. We participate together with her in joint projects and, we share co-author publications. I am well acquainted with her scientific issues. I have to say that Professor Kamelia Petrova works excellently as a tutor and scientist. She leads and participates in projects, being extremely active and hardworking. The publications, projects and citations presented by her are proof of her excellent work and a good basis for her academic development.

8. Conclusion

In connection with the above, I propose that Kamelya Petrova **to be elected** as a „Associate Professor“ in the discipline “Soil science and basics of fertilization” in the Professional field 6.5 Forestry, scientific specialty “Forest melioration, protection of forest and special forests uses”.

Prepared the opinion

/prof. B. Hristov/

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