

OPINION

by Mariyana Nedyalkova Perifanova-Nemska, professor, PhD, University of Food Technologies

of the materials submitted for participation in the competition to occupy the academic position of "associate professor" of University of Plovdiv "Paisii Hilendarski" by: area of higher education 4. Natural sciences, mathematics and informatics professional direction 4.2. Chemical Sciences (Organic Chemical Technology, Food Chemistry)

In the competition for "docent", announced in the State Gazette, no. 39 of 02.05.2023 and on the website of the University of Plovdiv "Paisii Hilendarski" for the needs of the Department of Chemical Technology, Faculty of Chemistry, as a candidate participates Assist. Prof. Dr. Zhana Yuliyanova Petkova from the Department of Chemical Technology at the Faculty of Chemistry of University of Plovdiv "Paisii Hilendarski"

1. General presentation of the procedure and the candidate

By order No. PD-21-1426/30.06.2023 of the Rector of the University of Plovdiv "Paisii Hilendarski" (PU) I have been appointed as a member of the scientific jury of a competition for the academic position of 'associate professor' at the PU in the field of higher education 4. Natural sciences, mathematics and informatics professional direction 4.2 Chemical sciences, scientific specialty Organic chemical technology, Food chemistry, announced for the needs of the Department of the Chemical Technology, Faculty of Chemistry.

The presented set of materials on an electronic medium is in accordance with the Rules for the Development of the Academic Staff of the PU, and includes all the necessary documents.

For participation in the competition, 18 scientific publications and 1 teaching aid are submitted, which do not repeat the materials used in the previous procedures for acquiring the title of "Doctor" and for holding the title of "Chief Assistant", as well as for certifying the fulfillment of the national minimum requirements in The register of the academic staff: All publications are referenced and indexed in Scopus and/or Web of Science databases (18 publications – in scientific journals; 6 of the publications are according to indicator C.4. and 12 – according to indicator D.7.) ; one teaching aid on the competition discipline (co-authored) with a reviewer and ISBN 978-619-202-859-6. All scientific publications are co-authored, and in 6 of the publications (33%) the candidate is the first author.

The total number of observed citations across all publications (up to 2022) is 232, with 162 in Scopus and/or Web of Science databases and 70 in other non-refereed peer-reviewed journals. A total of 90 citations were noticed on the publications submitted for participation in the competition, of which 70 were in publications referenced and indexed in Scopus and/or Web of Science databases.

All minimum national requirements are met.

2. General characteristics of the applicant's activity

The candidate averaged more than 600 hours per year from 2016 to 2023 with undergraduate and graduate students, supervised the theses of 3 successfully defended bachelor's students and is currently the supervisor of 3 current theses.

Evaluation of the candidate's scientific and scientific-applied activity

Chief Assistant Dr. Zhana Yuliyanova Petkova has participated in the following research projects: project under the "Scientific Research" Fund - MES (leader); 6 projects under the Scientific Research Fund at the University of Plovdiv "Paisii Hilendarski" (team member); 1 project under the "Science" Fund - UHT (team member); 1 international project with Global Enterprise Technologies Corp., MA, USA (team member); 1 educational project under the Operational Program "Science and Education for Intelligent Growth" to create a common Master's program "Intelligent Analytics" together with SU "St. Kliment Ohridski" (team member); 1 under the national plan for recovery and resilience, procedure for providing funds from the mechanism for recovery and sustainability, "Program for accelerating economic recovery and transformation through science and innovation", pillar 2 "Establishment of a network of research universities in Bulgaria" (head of a scientific group (leading scientist)).

The main scientific and scientific-applied contributions in the presented publications are as follows:

- the overall chemical and lipid composition of various botanical parts of non-traditional plants was studied, with the aim of fully characterizing and establishing the presence of biologically active components, and their application for food, pharmaceutical and other industrial purposes;
- the composition of eggs from different genotypes of hens was determined in order to increase consumer awareness;
- the changes that occur during heat treatment of different types of vegetable oils have been identified and approaches have been found to increase their oxidative stability;
- research on the composition of the studied plants can serve to prepare food products with improved physical and functional properties.

The candidate also presents educational and methodological contributions:

A Textbook for laboratory exercises in the discipline "Food Chemistry" has been issued, intended for the students of the "Bachelor" and "Master" degree, studying at the University of Plovdiv "Paisii Hilendarski", students from other higher education institutions in the country, as well as specialists from various other scientific fields. The guide examines the principles of existing modern methods for the analysis of the main components of food products - proteins, carbohydrates, lipids, vitamins and water content, as well as the methods for their quantitative determination.

The exercises included in the manual are aligned with the curriculum of the discipline "Food Chemistry", and they aim to provide knowledge and create skills for solving practical questions from daily chemical practice for the quality of food products in terms of determining the content of the main nutrients and biologically active components, as well as determination of the main physicochemical parameters of lipids and food products.

3. Critical remarks and recommendations

I have no critical notes.

I know Chief Assistant. Dr. Zhana Yuliyanova Petkova since her student years. Even then, she stood out with a desire for the new. A responsible, executive person, able to set and complete tasks by herself, at the same time possessing the ability to work in a team.

I recommend the candidate to continue with the same enthusiasm her research and teaching activity and to participate in the creation of a textbook on some of the taught disciplines.

4. CONCLUSION

The documents and materials presented by the Chief Assistant. Dr. Zhana Yuliyanova Petkova meets all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of the ZRASRB and the relevant Regulations for the Development of the Academic Staff of PU "Paisiy Hilendarski".

The candidate in the competition has submitted a sufficient number of scientific papers. The candidate's scientific and teaching qualifications are unquestionable.

The achievements of the Chief Assistant Dr. Zhana Yulianova Petkova results in the educational and scientific research activities fully correspond to the minimum national and specific requirements of the Faculty of Chemistry of the University of Plovdiv "Paisii Hilendarski", adopted in connection with the Regulations of the PU for the application of ZRASRB.

After familiarizing myself with the materials and scientific works presented in the competition and analyzing their significance, I find it reasonable to give my positive assessment and to recommend to the Scientific Jury to prepare a report-proposal to the Faculty Council of the Faculty of Chemistry for the selection of the Head of Assistant. Dr. Zhana Yuliyanova Petkova at the academic position of "associate professor" at University of Plovdiv "Paisii Hilendarski" in: field of higher education 4. Natural sciences, mathematics and informatics professional direction 4.2. Chemical Sciences (Organic Chemical Technology, Food Chemistry).

28.08.2023.

Prepared the opinion:

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