

## OPINION

by **Maria Yordanova Angelova-Romova,**  
**Associate Professor at Plovdiv University "Paisii Hilendarski"**

of the materials submitted for participation in the competition to occupy the academic position of "Associate Professor" at 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 "Associate Professor", 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, the candidate Dr. Petkova submitted a total of 31 scientific articles, of which 1 dissertation work for obtaining the education and scientific degree "Doctor", 1 university textbook, 29 scientific publications (24 articles in refereed and indexed publications, 5 articles in non-refereed scientific publications) and a list of her participation in 12 research projects (7 university, 2 national under her leadership, 2 national as a participant and 1 international). For participation in this competition for "Associate Professor", the applicant submits for review 18 scientific publications (all referenced and indexed in Scopus/Web of Science databases) that are outside the dissertation and are taken into account for the last evaluation, 1 university textbook and participation in 12 research projects. In four of these publications she is a co-author, but despite this, in terms of quantity criteria and the content of the scientific work of Chief assistant professor Petkova exceeds the minimum national requirements for applying for the academic position of "Associate Professor" – the total number of points is 685 (without the 4 joint publications) out of the required 400.

The papers presented for consideration are in good formatted form and very well organized. All applied scientific works are of a high level and have indisputable practical-applied significance.

Chief assistant professor Zhana Petkova, PhD has been working at PU Paisii Hilendarski since 2015. I have known the applicant since she was enrolled as a doctoral student in 2012 in the Department of Chemical Technology. She is very responsible, ambitious teacher respected by both colleagues and students.

## 2. General description of the applicant's activity

*The educational and pedagogical activities* of Chief Assistant Professor Petkova includes conducting lectures, seminars and laboratory exercises with students from the Bachelor and Master's Degrees. She participated in the creation of 4 new curricula for the Master's degree in Food Chemistry, as well as in the development of 3 new laboratory exercises for the Bachelor's degree. She is the co-author of a study guide for students of the Master's Degree in Food Chemistry.

Her average workload over the past five years has been from 546 to 721 hours, which exceeds the set norm of 360 hours of academic employment. Her successful work as a teacher is also supported by the three graduate students to whom she was the research supervisor.

The high *evaluation of the candidate's scientific and scientific-applied work* can be supported by the presented 18 scientific publications – 17 in foreign and 1 in a Bulgarian journal with IF/SJR. The distribution by quartiles is as follows – Q1 – 8 pcs.; Q2 – 6 pcs.; Q3 – 2 pcs. and Q4 – 2 pcs. The total number of citations presented is 232 (up to 2022), with 162 in the Scopus/Web of Science database and 70 in other non-refereed journals. A total of 90 citations were noticed on the publications submitted for participation in the competition (70 are in the Scopus/Web of Science database). The presented scientific works are accessible to a wide audience, thanks to which Chief Assistant professor Petkova receives high recognition from a number of researchers abroad. The applicant also has a significant number of participations in national and international scientific forums in the form of 6 reports and 37 posters – a total of 43.

The main *contributions* in the considered scientific publications can be presented as:

➤ *scientific contributions* – for the first time, the chemical and lipid composition of various types of non-traditional cultivated and wild plants in Bulgaria with possibilities for application in food products or supplements were investigated. 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;

➤ *scientific and applied contributions* – the possibilities of utilizing biologically active substances from various non-traditional plants as components in the perfumery, cosmetic and pharmaceutical industries have been studied. The composition of eggs from different genotypes of hens was determined in order to increase consumer awareness.

The high significance of the applicant's contributions is supported by the following circumstances:

✓ Publication of articles in journals with quartile Q1 – 8 pcs; with Q2 – 6 pcs; with Q3 – 2 pcs, and with Q4 – 2 pcs.

✓ in 1/3 of the presented materials Chief assistant professor Petkova is the first author, which is an indicator of her scientific and research competence;

✓ in the 18 scientific publications presented for participation in the competition, a total of 90 citations were noticed, of which 70 are in the Scopus/Web of Science database;

✓ significant number of participations (43) in national and international scientific forums – 6 reports and 37 posters.

The preparation and conducting of new exercises and lectures, as well as the participation of Chief assistant professor Petkova as a co-author in a university textbook confirms her qualities as a teacher.

I explicitly grant a high assessment to the scientific and scientific-applied work presented by Chief assistant professor Petkova in the field of food chemistry and in particular the chemistry of lipids. The submitted report on the fulfilment of the minimum national requirements for occupying the academic position "Associate Professor" shows that the applicant covers even more and exceeds the requirements according to the different groups of indicators.

### **3. Critical remarks and recommendations**

I have no critical remarks about the materials presented.

### **3. 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 "Paisii Hilendarski".

The candidate in the competition has submitted a sufficient number of scientific works published after the materials used in the defence of the PhD Degree and Chief Assistant professor. The applicant's works contain original scientific and applied contributions that have received international recognition, the main part of which has been published in scientific journals issued by international academic publishing houses. The scientific and teaching qualifications of Chief assistant professor Petkova are unquestionable.

The achievements of the Chief Assistant 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 Assistant Prof. Dr. Zhana Yuliyanova Petkova to 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: .....

/Assoc. Prof. Dr. Maria Angelova-Romova/