

## **OPINION**

**from Plamen Angelov Angelov, PhD – associate professor at Paisii Hilendarski University of Plovdiv**

on materials presented for the competition for academic position of “Associate professor” at Paisii Hilendarski University of Plovdiv

Field of higher education 4. Natural sciences, mathematics and informatics

Professional direction 4.2. Chemical sciences (Organic Chemistry, Bioorganic Chemistry)

In the competition for the position of "associate professor", announced in the State Gazette, issue 98 of 19.11.2024 and on the website of Plovdiv University "Paisii Hilendarski" for the needs of the Department of Organic Chemistry at the Faculty of Chemistry of PU "Paisii Hilendarski", as a candidate participates Chief Assistant Professor Dr. Mina Mihaylova Todorova from the Department of Organic Chemistry at the Faculty of Chemistry of PU "Paisii Hilendarski"

### **1. General presentation of the obtained materials**

By order No. RD-22-81 of 17.01.2025 of the Rector of Plovdiv University "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 PU in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.2. Chemical Sciences (Organic Chemistry, Bioorganic Chemistry), announced for the needs of the Department of Organic Chemistry at the Faculty of Chemistry of PU "Paisii Hilendarski" Only one candidate has submitted documents for participation in the announced competition: Chief Assistant Professor Dr. Mina Mihaylova Todorova from the Department of Organic Chemistry at the Faculty of Chemistry of PU "Paisii Hilendarski". The set of materials presented by Mina Mihaylova Todorova on paper and electronic media is in accordance with the Regulations for the Development of the Academic Staff of the University of Plovdiv, and includes the following documents:

1. Application form to the rector for admission to the competition;
2. Curriculum vitae in European format;
3. Diploma of higher education with acquired educational and qualification degree "Master" with appendix;
4. Diploma of educational and scientific degree "Doctor";
5. List of scientific works;

6. Scientific works (copies of publications);
7. List of citations;
8. Certificate of compliance with the minimum national and additional faculty requirements;
9. Annotations of the materials under Art. 65. of the PRASPU (in Bulgarian and foreign language) with an extended habilitation certificate;
10. Self-assessment of contributions;
11. Declaration of originality and authenticity of the attached documents;
12. Certificate of work experience;
13. Documents for academic work;

The candidate Mina Mihaylova Todorova has applied a total of 33 scientific papers. 24 scientific papers that are outside the dissertation and the competition for the position of chief assistant are accepted for review, and are taken into account in the final assessment. 9 scientific papers on the dissertation and the position of chief assistant are not reviewed. All 24 reviewed scientific papers are in international journals with an impact factor or SJR. A list of 152 noticed independent citations (without auto-citations) of the candidate's works is also attached.

## **2. General characteristics of the candidate's activities**

### *Evaluation of the candidate's teaching and pedagogical activities*

The candidate has extensive experience in teaching and learning, gained over a total of 18 years of experience as an assistant and chief assistant at the University of Chemical Technology Plovdiv (14 years) and as a chief assistant at the University of Applied Sciences "Paisii Hilendarski" (4 years). Her teaching activities include laboratory exercises, seminars and lectures with students from various bachelor's and master's programmes. The courses taught are in the field of organic and bioorganic chemistry and fully correspond to the competitive position. The candidate's teaching workload as an assistant and chief assistant amounts to an average of 373 teaching hours per year, which exceeds the standard for teaching employment at the University of Applied Sciences "Paisiy Hilendarski". In addition, Mina Mihaylova Todorova has successfully supervised 6 diploma theses and is a co-author of 2 teaching aids.

### *Evaluation of the candidate's scientific and applied scientific activities*

The research activity of Chief Asst. Prof. Dr. Mina Mihaylova Todorova is in the fields of organic and bioorganic chemistry. It includes design, synthesis, spectral studies and structural characterization of new styrylquinolinium compounds with potential nonlinear optical activity; *in silico*, *in vitro* and *ex vivo* studies of anti-inflammatory activity; as well as studies on the biological activity of propolis and its pharmacological potential. Among the scientific publications submitted by the candidate, 11 are in journals from the first quartile (Q1) according to the IF or SJR rankings of WoS or Scopus, 2 in the second (Q2), 6 in the third (Q3) and 4 in the fourth (Q4) quartile, according to information from the relevant databases. In four of these publications Mina Todorova is the first author, which is a good attestation of her personal contribution.

### *Contributions (scientific, applied science, applied) and citations*

The contributions of the scientific work of Chief Assistant Professor Dr. Mina Todorova are of a fundamental and scientifically applied nature. They are expressed in enriching, expanding and deepening the knowledge in the field of dye chemistry and biologically active organic compounds. In terms of dye chemistry, there are contributions in the design of dyes such as NLO-phores and optimizing synthetic approaches for their preparation - the introduction of various structural elements (donor or acceptor groups) has been studied, in order to influence the charge transfer in the system and increase the second-order nonlinear optical response. The contributions of the research work on propolis include the first-of-its-kind study of 80 propolis samples from all 28 regions of Bulgaria and the establishment of a connection between the region from which the propolis was isolated and its physicochemical properties, content of polyphenols and flavonoids, as well as its antioxidant and antimicrobial activities. It has been established that the highest antioxidant values of propolis coincide with the highest concentrations of phenols and flavonoids. High antimicrobial activity of propolis extracts against Gram-positive bacteria has been proven. The protective effects of edible coatings of carboxymethylcellulose with propolis included on the shelf life of food products have been studied. It has been proven that edible coatings effectively protect the studied products.

The contributions of the candidate's work are significant and the quantitative indicators of the criteria for holding the academic position have been met. The articles submitted in the procedure have been cited a total of 152 times. There are no negative citations. Thus, the candidate shows good international recognition of his work and contributions.

## CONCLUSION

The documents and materials submitted by Dr. Mina Mihaylova Todorova meet all the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for the Implementation of ADASRB and the relevant Regulations of the University of Paisiy Hilendarski.

The candidate in the competition has presented a sufficient number of scientific works published after the materials used in the defense of her doctoral degree. The candidate's works contain original scientific and applied scientific contributions that have received international recognition by being published in journals and scientific collections published by international academic publishing houses. The scientific and teaching qualifications of Dr. Mina Mihaylova Todorova are unquestionable.

The results achieved by Dr. Mina Mihaylova Todorova in teaching and research activities fully comply with the minimum national and additional requirements of the Faculty of Chemistry, adopted in connection with the Regulations of the University for the Implementation of ADASRB.

After reviewing the materials and scientific papers presented in the competition, analyzing their significance and the scientific, scientific-applied and applied contributions contained therein, 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 at the Paisii Hilendarski University for the election of Mina Mihaylova Todorova to the academic position of "associate professor" at the Paisii Hilendarski University in: field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical sciences (Organic chemistry, Bioorganic chemistry).

10.03.2025.

**Reviewer:** .....

Assoc. prof. Plamen Angelov, PhD