REVIEW

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

of 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, Organic analysis)

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. Stanimir Petrov Manolov 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-22-80 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, Organic Analysis), 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. Stanimir Petrov Manolov from the Department of Organic Chemistry at the Faculty of Chemistry of PU "Paisii Hilendarski".

The set of materials presented by Stanimir Petrov Manolov 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;
14. Research papers;
15. Scopus and WoS scientometric data reference

The candidate Stanimir Petrov Manolov has submitted a total of 25 scientific papers, 1 published book based on a defended dissertation for the award of the educational and scientific degree "doctor", and a list of 10 participations in research projects. 20 scientific papers and 10 research projects that are outside the dissertation are accepted for review and are taken into account in the final assessment. 5 scientific papers on the dissertation are not reviewed. All 20 reviewed scientific papers are in international journals with an impact factor or SJR. A list of 71 noted independent citations (without auto-citations) of the candidate's works is also attached.

2. Short biographical data

Stanimir Manolov graduated as a bachelor at the Faculty of Chemistry of the Paisii Hilendarski University in 2008, and in 2009 he received a master's degree at the same faculty. He was a full-time doctoral student under the supervision of Prof. Dr. Iliyan Ivanov from 2010 to 2012, again at the Faculty of Chemistry of the Paisii Hilendarski University, with the doctoral studies continuing for another 2 years in part-time form and ending with the successful defense of a dissertation on the topic "Alternative methods for the synthesis of derivatives of the alkaloid Cherylline" (defended on 13.02.2015). In the period March 2012 - February 2016, Stanmir Manolov was an assistant professor at the Department of Organic Chemistry, and from February 2016 to the present he is a chief assistant professor at the same department. In parallel with his work as an assistant and chief assistant at the Paisii Hilendarski University, Stanimir Manolov has periodically been a part-time lectur-

er at the Medical University of Plovdiv, and has also gained valuable experience as an assistant for the development of new products in the botanical control laboratory of Nutra Quest Pharma Group, Kingston, Hereford, UK.

3. 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 13 years of experience as an assistant and chief assistant. His teaching activities include laboratory exercises, seminars and lectures with students from various bachelor's and master's programmes at the Faculty of Chemistry of the University of Plovdiv, as well as laboratory exercises with students of medicine and pharmacy at the Medical University of Plovdiv. The courses taught are in the field of organic chemistry and fully correspond to the competitive position. The pedagogical workload of the candidate as an assistant and chief assistant amounts to an average of 442.7 teaching hours per year, which exceeds the standard for teaching employment at the University of Paisiy Hilendarski. In addition to this, Stanimir Manolov has successfully supervised 13 diploma theses (11 bachelor's and 2 master's). Along with his teaching activities, Stanimir Manolov is actively involved in the development and updating of curricula - he has developed curricula for 8 disciplines and 5 electronic courses.

Evaluation of the candidate's scientific and applied scientific activities

The research activity of Dr. Stanimir Manolov is in the fields of organic synthesis and analysis. It includes the application of established methods, their modification and the development of alternative approaches for the synthesis of organic compounds with potential biological activity; synthesis, isolation and identification of new organic compounds of interest for medicinal and pharmaceutical chemistry; full spectral characterization of new organic molecules with ^{1}H and ^{13}C NMR, ultraviolet (UV), infrared (IR) and mass spectral analysis; conducting in vitro studies on antioxidant and anti-inflammatory effects of new organic compounds. Among the scientific publications submitted by the candidate, six are in journals from the first quartile (Q1) according to the IF or SJR rankings of WoS or Scopus, one in the second (Q2), four in the third (Q3) and nine in the fourth (Q4) quartile, according to information from the relevant databases. In eight of these publications, Stanimir Manolov is the first author, and in four - the corresponding author, which is a good testimony to his personal contribution. Stanimir Manolov has actively presented the results of his

research work through posters and reports at numerous scientific conferences in the country and abroad - 67 reports and 80 poster presentations.

Contributions (scientific, applied science, applied) and citations

The contributions of the scientific work of Dr. Stanimir Manolov are primarily of a fundamental nature, but some of them also have the potential for practical application - obtaining organic compounds unknown to practice and studying their properties, developing and improving innovative and ecological methods for synthesis, applying modern methods for analysis. The scientific and scientific-applied contributions can be summarized as follows:

1. The microwave-assisted reaction of intramolecular α-amidoalkylation has been successfully applied as an ecological method for obtaining sulfonamide tetrahydroisoquinoline derivatives. It has been shown that with the use of a PPA/SiO_2 catalyst, the reactions proceed faster and with higher yields, compared to previously known methods.

2. A mechanochemical approach for the synthesis of various amides using a vibrating ball mill has been effectively implemented. The method does not use a solvent for the reactions, overcomes solubility problems in conventional methods and offers environmental and other advantages.

3. The application of a heterogeneous catalytic system TfOH/SiO_2 as a heterogeneous acid catalyst in intramolecular α-amidoalkylation reactions has been demonstrated

4. A series of new organic compounds have been obtained, combining in their structure fragments of known drugs and/or other biologically active substances, such as tryptamine, 4-methylcoumarin, trimetazidine, amphetamine, as well as the profens ibuprofen, ketoprofen, flurbiprofen, naproxen and carprofen.

5. The phytochemical composition of *Chenopodium botrys* from Bulgaria has been studied, and the polyphenols in it have been successfully fractionated. For the first time in *C. botrys*, the flavonoids pectolinarigenin, demethylnobiletin and isosinensetin, as well as the glycosides of quercetin (triglycoside, acylglycoside), kaempferol, isorhamnetin, hispidulin and jadzezosidine were identified and reported. Using in vitro methods, the biological activities of these compounds against oxidative stress, nitrosative stress, anti-inflammatory activity and anti-tryptic activity were evaluated.

6. A detailed analysis of the polyphenolic composition of *H. italicum* grown in Bulgaria was performed. The polyphenolic complex was successfully separated into fractions using solvents of different polarity. 60 components of the polyphenolic complex were identified, some of which were

reported for the first time in the composition of *H. italicum*. Some biological activities of the different fractions were studied.

The contributions of the candidate's work are significant and the quantitative indicators of the criteria for holding the academic position are met. Of the 20 papers submitted, 18 have been cited a total of 71 times, of which 49 in sources indexed in WoS/Scopus, 16 in other journals, and 6 in foreign dissertations. There are no negative citations. Overall, the candidate shows good international recognition of his work and contributions.

4. Assessment of the candidate's personal contribution

As a colleague at the Department of Organic Chemistry, I have observations on the candidate's work and have no doubt in the active work and significant personal contribution of Stanimir Manolov in all papers submitted for review under this competition.

5. Critical remarks and recommendations

None.

6. Personal impressions

I know Stanimir Manolov as a hardworking and conscientious colleague, an impression left on me since his student years, and later as a doctoral student and assistant professor at the Department of Organic Chemistry.

CONCLUSION

The documents and materials submitted by Senior Assistant Professor Dr. Stanimir Petrov Manolov 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 his 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. Stanimir Petrov Manolov are unquestionable.

The results achieved by Dr. Stanimir Petrov Manolov 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 in them, I find it reasonable to give my positive assessment and recommend to the Scientific Jury to prepare a report-proposal to the Faculty Council of the Faculty of Chemistry at the "Paisiy Hilendarski" University for the election of Stanimir Petrov Manolov to the academic position of "associate professor" at the "Paisiy Hilendarski" University in: field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical sciences (Organic chemistry, Organic analysis).

07.03. 2025 Reviewer: .....

Assoc. prof. Plamen Angelov, PhD