

OPINION

by **Petko Ivanov Bozov**

associate professor at University of Plovdiv „Paisii Hilendarski“

of the materials submitted for participation in the competition
to occupy the academic position of "associate professor"
of Plovdiv University "Paisii Hilendarski"

by: field of higher education **4. Natural sciences, mathematics and informatics;**
professional direction **4.2. Chemical Sciences (Organic chemistry, Organic analysis).**

In the competition for "docent", announced in the State Gazette, no. 98 of November 19, 2024 and in the internet page of the University of Plovdiv "Paisii Hilendarski" for the needs of the Department of Organic Chemistry, at the Faculty of chemistry, as the only candidate participated ch. assistant **Dr. Stanimir Petrov Manolov** from the Department of Organic Chemistry, Faculty of Chemistry, PU "Paisii Hilendarski".

1. General presentation of the procedure and the candidate

By order No. PD-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 to ensure a procedure for selecting an "associate professor" at the PU in the field of higher education 4. Natural sciences, mathematics and informatics, professional direction 4.2. Chemical Sciences (Organic Chemistry, Organic Analysis) for the needs of the Department of Organic Chemistry at the Faculty of Chemistry of the PU.

The presented by ch. assistant Dr. Stanimir Petrov Manolov, a set of materials on paper and electronic media is in accordance with the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for its Implementation (RILDASRB) and the Regulations on the Development of the Academic Staff of the PU (RDASPU), and includes all the necessary documents:

Application to the rector for admission to participate in the competition; Autobiography; Diploma of higher education for "master"; Diploma for educational and scientific degree "Doctor"; List and copies of scientific works and citations; Certificate of compliance with minimum national requirements; Annotations of the materials under Art. 65. From PRASPU (in Bulgarian and Eng-

lish) with extended habilitation certificate; Self-assessment of contributions; Declaration of originality and authenticity of the attached documents; Certificates of work experience and study work; List of participations in projects and scientific conferences; Certificate of compliance with the minimum additional requirements of the Faculty of Chemistry at the PU; Title pages of protected diploma theses prepared under the guidance of the candidate; List of prepared curricula; List of reviews of scientific publications and List of scientific activity as a guest editor of specialized editions of scientific journals.

For participation in the competition, Dr. Manolov has submitted 20 scientific works that are not included in the procedure for obtaining the educational and scientific degree "doctor" and in the competition for the appointment of JSC "chief assistant", 1 published book "Alternative methods for obtaining of cherylline derivatives" based on a protected dissertation work for awarding the scientific degree "doctor" and 71 citations of 18 publications included in the associate professor procedure. All submitted materials are in the area of the competition Organic Chemistry (Organic Analysis).

The documents presented for consideration are very well formed and arranged. All articles are prepared and written at a very high scientific level and have indisputable practical-applied significance. The scientific production of ch. assistant Manolov fully meets the minimum national requirements for holding the academic position of "associate professor", and the additional minimum requirements of the Faculty of Chemistry for candidates for teaching activities have been exceeded three times.

I know the candidate only visually and have no direct impressions of his work.

2. Brief biographical data.

Stanimir Petrov Manolov graduated from PU „Paisii Hilendarski“ in 2008 in Bachelor of Science undergraduate program. A year later, he acquired the Master's degree in Organic Chemistry in the Master's program "Organic Chemistry". From 01.03.2010 - 01.03.2012 is a full-time doctoral student in a doctoral program: "Organic Chemistry" at the Faculty of Chemistry of Plovdiv University "Paisii Hilendarski". His doctoral studies continue for another two years in absentia form of study. From 03.2012 - 02.2016 Dr. Manolov is an assistant in the "Organic Chemistry" department, and since 02.2016 until now he holds the academic position of ch. Assistant.

In the periods from 15.01.2021 – 31.07.2021 and 15.09.2024 – 31.07.2025 Dr. Manolov worked as a part-time teacher at Medical University - Plovdiv.

3. General characteristics of the applicant's activity

Assessment of educational and pedagogical activity

Dr. Manolov was appointed in 03.2012. for a main contract assistant in the "Organic Chemistry" Department of the "Paisii Hilendarski" PU, and from 02.2016 until now he is the Ch. assistant in the same department. His total teaching experience is 13 years. His teaching activity is related to conducting practical, seminar exercises and lectures in organic chemistry, bioorganic chemistry, chemistry of medicinal substances, chemistry of narcotic substances, organic synthesis, organic analysis, stability of medicinal preparations, methods and approaches for the study of biological activity, drug design, chemistry of steroids of students from the bachelor's and master's programs of the Faculty of Chemistry at the PU.

For a period of 9 years as a chief assistant, Dr. Manolov had 3203.4 hours of classroom employment in the educational-qualification degree "Bachelor"; in the degree "Master" 597 hours and in the degree "Master" as a part-time assistant at the Medical University 184 hours. His total teaching workload is 3984.4 hours, which is 442.7 hours per year.

The lectures delivered in the "Bachelor" degree are on the disciplines of Organic chemistry and Organic analysis, and in the "Master" degree they are on the disciplines Steroid chemistry, Stability of Medicinal products, Drug design, Organic chemistry.

The guidance of laboratory exercises with students from "Bachelor" degree are on the disciplines: Organic Chemistry, Chemistry of medicinal substances, Bioorganic Chemistry, Chemistry of narcotic substances. With students from "Master" degree are in the disciplines: Organic synthesis, Organic Chemistry, Stability of medicinal products, Methods and approaches for the study of biological activity.

Seminar exercises on Organic Chemistry were performed. with students from the " Bachelor " degree II course. Ch. assistant Manolov was the supervisor of 11 students who successfully defended their diploma theses in the "Bachelor" degree and of 2 graduates in the "Master" degree.

He has developed curricula for 8 disciplines in "Bachelor" and "Master" degree and 5 Electronic courses.

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

All 20 articles applied in the associate professor procedure have been published in refereed and indexed editions in the world-renowned databases Web of Science (WOS) and Scopus. Of them, 6 are with quartile Q1, one article is with Q2, 4 pieces are with Q3 and 9 pcs. are with Q4. The candidate is the lead author in 12 articles (60%), in 8 of them he is in the first place, in 4 he is a corresponding author. He is first and corresponding author in one of the publications.

Ch. assistant Manolov has attached 71 citations to 18 publications included in the associate professor procedure. Of these, 49 are in journals that are included in the Scopus and/or ISI Web of

Knowledge (Web of Science) databases, 16 are in specialized journals, and 6 citations are found in foreign doctoral dissertations and diploma theses for „Master“ degree.

The data described above show the significant contribution of the candidate in the applied scientific works and his recognition in the scientific circles.

Dr. Manolov has participated in 10 scientific research projects: 6 of them to the "Scientific Research" fund at PU Paisii Hilendarski, 3 to the "Scientific Research" fund at the Ministry of Education and Culture and one project financed by the European Union - NextGenerationEU.

Papers 1-8 and Papers 14 and 15 report the synthesis of a series of novel N-containing hybrid molecules of 2-aminobenzothiazole-substituted 2-phenylethyl-amines; sulfonamide and ibuprofen derivatives, analogues of santacrusamate. The new compounds were characterized by ¹H- and ¹³C-NMR, IR and UV spectra, Mass spectrometry.

All synthesized hybrid molecules were subjected to in vitro biological tests: their anti-inflammatory, antioxidant, anti-tryptic, antibacterial activity was tested. The obtained results are compared with in silico predictions.

Publications 16, 17 and 18 reported the synthesis of N-(2-(1H-indol-3-yl)ethyl)-2-(6-methoxynaphthalen-2-yl)propanamide and its 6-Cl derivative. Papers 9, 10 and 13 investigated the chemical composition and antioxidant activity of *Roman Chamomile*, *Anise hyssop*, *Nepeta transcaucasica* Grossh and *Nepeta cataria* L. essential oil.

Articles 11, 12 and 18 investigated the polyphenolic composition of two plant species *Helichrysum italicum*, *Chenopodium* and seeds of *Lupinus angustifolius* L. cultivar 'Boregine' *botrys* and tested their biological activity. A brief review of the synthesis of the alkaloid cherillin is given in paper 20.

Contributions of the candidate's research

- Scientific:

1. The research work of Dr. Manolov leads to obtaining new organic compounds characterized by modern methods of analysis, their properties determined, tested for biological activity, innovative and ecological synthesis methods developed and perfected.

2. The microwave-assisted intramolecular α -amidoalkylation reaction was applied as an ecological method for the preparation of 1,2,3,4-tetrahydroisoquinoline sulfonamides.

3. A mechanochemical approach for the synthesis of N-(2,2-diphenylethyl)-4-nitrobenzamide was effectively implemented.

4. A new approach for the synthesis of Santacruzamate A analogues has been developed.

5. The components of the polyphenol complex in the composition of *Helichrysum italicum*, *Chenopodium* and *Lupinus angustifolius* L. and their biological activity was tested.

6. The composition of the essential oil of *Roman Chamomile*, *Anise hyssop*, *Nepeta transcaucasica* Grossh and *Nepeta cataria* L. has been established, their antioxidant activity was tested.

- Applied:

The obtained results of testing different biological activity are promising that some of the obtained compounds could find practical application in different areas of human activity.

4. Critical remarks and recommendations

I have no critical remarks about the materials provided for review.

5. CONCLUSION

The documents and materials presented by ch. assistant Dr. Stanimir Petrov Manolov meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of LDASRB and the relevant Regulations of PU "Paisii Hilendarski".

The candidate in the competition has submitted a significant number of scientific works published after the materials used in the defense of the "Doctor" degree and chief assistant. The candidate's works contain original scientific and applied contributions that have received international recognition, most of which have been published in journals and scientific collections issued by international academic publishing houses. His theoretical developments have practical applicability, and some of them are directly oriented towards academic work. The scientific and teaching qualifications of ch. assistant Manolov is undoubted

The achievements of ch. assistant Stanimir Petrov Manolov, in his academic and research activities fully correspond to the minimum national and additional requirements of the Faculty of Chemistry, adopted in connection with the Regulations of the PU for the application of LDASRB.

After getting acquainted with the materials and scientific works 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 to recommend the Scientific Jury to prepare a report-proposal to the Faculty Council of the Faculty of Chemistry for choosing ch. assistant Dr. Stanimir Petrov Manolov in the academic position of "associate professor" at PU "Paisii Hilendarski" in field of higher education **4. Natural sciences, mathematics and informatics**, professional direction **4.2. Chemical Sciences** (Organic Chemistry, Organic Analysis).

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Prepared the opinion:

(Assoc. prof. Dr. Petko Bozov DSc)