

OPINION

from prof. Ginka Atanasova Antova, PhD,
University of Plovdiv "Paisii Hilendarski", Faculty of Chemistry

on the materials submitted for the competition
for the academic position of "Professor" at University of Plovdiv "Paisii Hilendarski",
in area of higher education: 4. Natural sciences, mathematics and informatics
professional field: 4.2. Chemical sciences (Organic Chemistry, Bioorganic Chemistry)

In the competition for the academic position of "Professor", announced in the State Gazette, issue 96 of 11 November 2025, and on the website of University of Plovdiv "Paisii Hilendarski" (PU) for the needs of the Department of Organic Chemistry at the Faculty of Chemistry, the admitted candidate is Assoc. Prof. Dr. Stoyanka Nikolova Atanasova from the Department of Organic Chemistry at the Faculty of Chemistry of PU.

1. General presentation of the procedure and the candidate

By Order No. ПД-22-53 of 09 January 2026 of the Rector of University of Plovdiv "Paisii Hilendarski" (PU), I was appointed as a member of the scientific jury for the competition for occupying the academic position of "**Professor**" at PU in the area 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.

Assoc. Prof. Stoyanka Nikolova Atanasova, PhD, from University of Plovdiv "Paisii Hilendarski", has been admitted to participate in the announced competition.

The set of materials submitted by Assoc. Prof. Atanasova on electronic media complies with the Regulations for the Development of the Academic Staff of PU.

The candidate, Assoc. Prof. Dr. Stoyanka Atanasova, has submitted a total of 28 scientific works, 3 textbooks, and a list of her participation in research projects and conferences over the past 5 years for her application for the academic position of "Professor", which have not been used for obtaining the educational and scientific degree "Doctor" or the academic position "Associate Professor". In the list of scientific publications, Assoc. Prof. Atanasova has included 2 scientific publications related to her dissertation topic and 20 scientific works with which she participated in the competition for the academic position of "Associate Professor," which are not subject to review for this competition. All scientific publications are in foreign journals with impact factor and impact rank. No plagiarism has been identified in the text of the scientific publications. Also provided are official certificates confirming her participation in scientific projects, her work experience, and her teaching activities. The total impact factor of the submitted publications is 106.4, and the Hirsch index (h-index) of Assoc. Prof. Stoyanka Atanasova is 12, according to data from Scopus.

2. Brief biographical data of the candidate

Assoc. Prof. Dr. Stoyanka Atanasova completed her higher education in 1996, obtaining a Master's degree in Chemistry from University of Shumen "Ep. Konstantin Preslavsky". Between 1996 and 1999 she worked as a chemistry teacher at Secondary School "P. R. Slaveykov" in the city of Dobrich. In 2003 she defended her dissertation and obtained the educational and scientific degree "Doctor" in the scientific specialty "Organic Chemistry". Since 2004 she has been appointed as a "Chief Assistant Professor" in the Department of Organic Chemistry at University of Plovdiv "Paisii Hilendarski". Since 2012 she has held the position of "Associate Professor" in the same department.

3. General characteristics of the candidate's activities

Evaluation of teaching and pedagogical activity

The teaching workload of Assoc. Prof. Dr. Atanasova includes lectures, seminars, and laboratory exercises in Organic Chemistry for the degree programs "Biology and Chemistry", "Chemistry and English", and "Teaching Natural Sciences in Lower Secondary Education", as well as the development of lecture courses and practical exercises in the disciplines "Bioorganic Chemistry" and "Organic Analysis" for the program "Analysis and Control". Assoc. Prof. Atanasova has developed a course in "English for Chemists", as well as a series of lectures and exercises in "Biochemistry" in English for foreign students. From 2012 to the present, she has supervised 21 successfully defended diploma theses in the programs "Chemistry", "Medical Chemistry", "Biology and Chemistry", and "Chemistry and English". She is also the supervisor of 6 doctoral students, of whom 2 have successfully defended, 1 has been discontinued with the right to defend, and 3 are currently active. Three textbooks have been published: "*Selective Topics in Inorganic Chemistry*" (2017 and 2023) and "*Selective Topics in Organic Chemistry*" (2019), co-authored with lecturers from the Medical University of Plovdiv, intended for students in the preparatory course of the Department of Language and Specialized Training. The total teaching workload of Assoc. Prof. Stoyanka Nikolova Atanasova for the past five-year period (academic years 2019/2020 - 2024/2025) is 1970 hours, with an average annual teaching load of 394 hours.

Assoc. Prof. Dr. Atanasova has delivered lectures under the Erasmus+ program at the University of Alicante, Spain in 2013, and at the University of Warsaw, Poland in 2014.

The teaching and pedagogical activity of Assoc. Prof. Dr. Atanasova demonstrates her high work capacity and professionalism, as well as her active involvement in all levels of the educational process.

Evaluation of scientific and applied research activity

Scientific publications

In the competition for the position of "Professor" Assoc. Prof. Dr. Stoyanka Atanasova participates with a total output of 28 scientific publications in journals referenced and indexed in Web of Science and/or Scopus, grouped as follows:

✓ **8 scientific publications** submitted to meet the minimum scientometric indicators under criterion **B** (4. Scientific publications in editions referenced and indexed in internationally recognized scientific databases) - of which 7 are in Q1 journals and 1 in a Q2 journal (**195 points**):

- *Applied Sciences* – 1 (Q2 - SJR₂₀₂₄=0.521 and IF₂₀₂₄=2.5);
- *Molecules* – 1 (Q1 - SJR₂₀₂₄=0.865 and IF₂₀₂₄=4.6);
- *Pharmaceuticals* – 3 (Q1 - SJR₂₀₂₃=0.845 and IF₂₀₂₃=4.3; SJR₂₀₂₄=1.019 and IF₂₀₂₄=4.8);
- *International Journal of Molecular Sciences* – 1 (Q1 - SJR₂₀₂₃=1.179 and IF₂₀₂₃=4.9);
- *Biomedicines* – 1 (Q1 - SJR₂₀₂₄=1.114 and IF₂₀₂₄=3.9);
- *Nanomaterials* – 1 (Q1 - SJR₂₀₂₄=0.811 and IF₂₀₂₄=4.3).

✓ **20 scientific publications** submitted to meet the minimum scientometric indicators under criterion Γ (7. Scientific publications in editions referenced and indexed in internationally recognized scientific databases), distributed as follows: 15 in Q1 journals and 5 in Q2 journals (**475 points**):

- *Applied Sciences* – 3 (Q2 - SJR₂₀₂₄=0.521 and IF₂₀₂₄=2.5; SJR₂₀₂₂=0.492 and IF₂₀₂₂=2.5);
- *Biomedicines* – 4 (Q1 - SJR₂₀₂₃=0.962 and IF₂₀₂₃=3.9; SJR₂₀₂₄=1.114 and IF₂₀₂₄=3.9);
- *Inorganics* – 1 (Q2 - SJR₂₀₂₄=0.509 and IF₂₀₂₄=3.0);
- *Molecules* – 2 (Q1 - SJR₂₀₂₄=0.865 and IF₂₀₂₄=4.6);
- *International Journal of Molecular Sciences* – 1 (Q1 - SJR₂₀₂₄=1.273 and IF₂₀₂₄=4.9);
- *Nanomaterials* – 1 (Q1 - SJR₂₀₂₄=0.811 and IF₂₀₂₄=4.3);
- *Scientia Pharmaceutica* - 1 (Q2 - SJR₂₀₂₂=0.462 and IF₂₀₂₂=2.5);
- *Pharmaceuticals* – 1 (Q1 - SJR₂₀₂₄=1.019 and IF₂₀₂₄=4.8);
- *Life* – 3 (Q1 - SJR₂₀₂₄=0.824 and IF₂₀₂₄=3.4);
- *Foods* – 1 (Q1 - SJR₂₀₂₄=1.021 and IF₂₀₂₄=5.1);
- *Plants* – 2 (Q1 - SJR₂₀₂₄=0.888 and IF₂₀₂₄=4.1).

In **17 of the publications**, the candidate is the **last author**, and in **14 of these** she is also the **corresponding author**. In **1 publication**, she is the **first and corresponding author**. In **4 publications**, she is the **fourth author**, being the corresponding author in one of them. She appears as third, fifth, seventh, and tenth author in one publication each, and as twelfth author in two publications. All of this demonstrates her leading role in the presented research. All publications are written in English.

It is noteworthy that a large part of the scientific works submitted for review result from collaboration with colleagues from the Departments of Inorganic Chemistry and Chemistry Education, and Analytical and Computer Chemistry; with colleagues from various departments of the Medical Universities in Plovdiv, Varna, and Sofia; the University of Food Technologies – Plovdiv; the University of Chemical Technology and Metallurgy – Sofia; the Institute of Organic Chemistry with Centre of Phytochemistry; the Institute of Optical Materials and Technologies; the Institute of Molecular Biology; the Institute of Biophysics and Biomedical Engineering; the Institute of Solid State Physics at the Bulgarian Academy of Sciences, Sofia; the Department of Organic Chemistry at the Faculty of Chemistry of Alzahra University in Tehran, Iran; the Department of Chemistry, Faculty of Natural Sciences, University of Sistan and Baluchestan, Iran, and others.

I consider the scientific output of Assoc. Prof. Dr. Stoyanka Atanasova to be of very high professional quality. The publication of her research in prestigious journals such as *Biomedicines*, *Molecules*, *Pharmaceuticals*, *International Journal of Molecular Sciences*, *Nanomaterials*, *Life*, *Foods*,

Plants (Q1), and *Applied Sciences, Inorganics, Scientia Pharmaceutica* (Q2) is indisputable evidence of the significance and quality of the obtained results.

Citations of the scientific output

The candidate has presented a total of **298 citations** of her publications from the past five years, in editions referenced and indexed in internationally recognized scientific databases (Scopus and Web of Science), which is indicative of the broad international impact of the published results (**596 points**). The recognition of the candidate within the scientific community, based on these citations, is unquestionable.

Participation in projects, conferences and published textbooks

Assoc. Prof. Dr. Atanasova is the scientific co-supervisor of two successfully defended doctoral students (**50 points**). She is the **principal investigator** of 1 national project funded by the National Science Fund at the Ministry of Education and Science (**20 points**), and of 1 internal university project. She is also a participant in **3 national research projects (30 points)** and 3 projects at the Medical University of Plovdiv. As a result of her project activities, University of Plovdiv “Paisii Hilendarski” has received funding amounting to 190,400 BGN (**38,1 points**). In the period 2017 - 2023, Assoc. Prof. Atanasova is a co-author of 3 published textbooks (**53.33 points**).

Certificates have also been provided for her participation with 28 oral presentations and 16 poster presentations at 12 international and 9 national scientific forums, as well as diplomas and certificates from courses and trainings.

Scientific and applied scientific contributions

The scientific interests of the candidate can be systematized into two main directions:

1. Design and synthesis of new compounds with spasmolytic, anti-inflammatory, and antimicrobial activity;
2. Preparation of silver nanoparticles and investigation of their biological activity.

Scientific contributions:

1. Expansion, and deepening of knowledge in the field of the synthesis of compounds with spasmolytic, anti-inflammatory, and antimicrobial activity.
2. Design of small molecules as spasmolytics and identification of synthetic approaches for their preparation.
3. Study of the introduction of various substituents into the molecule of the synthesized compounds on their antispasmodic activity.
4. Identification of clear relationships between molecular structure and biological activity of the synthesized compounds, which may serve as a basis for future rational design of biologically active substances.

Applied scientific contributions:

1. For the first time, the antispasmodic activity of 28 newly synthesized organic compounds has been determined and it has been proven that they do not affect the repeated acetylcholine response.

2. A quantitative approach has been adapted for evaluating the inhibition of albumin denaturation. This method serves as an indicator for determining *in vitro* anti-inflammatory activity, which has been confirmed through *ex vivo* assessment and *in silico* calculations.
3. A rapid, entirely green and environmentally friendly method has been developed for the synthesis of silver nanoparticles as carriers of a drug or synthetic substance. The synthesis conditions have been optimized.
4. For the first time, silver nanoparticles loaded with mebeverine, mebeverine precursors, and phenindione have been obtained and the antispasmodic and anticoagulant activity of immobilized nanoparticles has been investigated.
5. For the first time, changes in the chemical and lipid composition (fatty acids and tocopherols) of *Spirulina platensis* after the synthesis of silver nanoparticles using it have been studied, as well as the oxidant potential of nanoparticles obtained from two spirulina extracts. A relationship has been established between the change in extract composition and nanoparticle formation.

I accept the scientific and applied scientific contributions formulated by Assoc. Prof. Dr. Atanasova.

The presented scientific output and scientometric data of Assoc. Prof. Dr. Stoyanka Atanasova fully comply with the minimum national requirements for awarding the academic position of "Professor" in professional field 4.2 Chemical Sciences, as defined in the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), its Implementing Regulations, and the Regulations for Academic Staff Development of PU. The points indicated for each indicator are described and supported by evidence.

Achievement of the national minimum requirements in the area of higher education 4. Natural Sciences, Mathematics, and Informatics, professional field 4.2. Chemical Sciences and of the additional faculty requirements

Indicators	Content	Points for academic position "Professor"	Achievement of the candidate
A	Indicator 1	50	50
B	Indicator 2	-	-
B	Indicators 3 or 4	100	195
Г	Sum of indicators from 5 to 10	200	475
Д	Indicator 11	100	596
E	Sum of indicators from 12 to 20	150	191.4
Total of minimum national requirements		600	1507.4
Additional faculty requirements			
Requirement for holding the academic position of "professor" - Teaching and teaching activities - candidates must have conducted no less than 1800 hours of classroom lessons with students, of which no less than 150 hours of lectures in the discipline for which the competition is announced		1800 classroom hours	1970 hours (682 hours of lectures without doubling in Organic Chemistry and Bioorganic Chemistry)

The total number of points under the indicators from the national minimum requirements is 1507.4, while the required minimum is 600. In other words, the submitted materials for participa-

tion in the competition exceed the necessary minimum for holding the academic position of “Professor” in professional field 4.2 Chemical Sciences’ by approximately 2.5 times. The additional requirements of the Faculty of Chemistry have been fulfilled by Assoc. Prof. Atanasova in a categorical manner. The publication of research results in international specialized journals ranked in quartiles Q1 and Q2, the large number of citations by foreign authors, and her participation in scientific projects and international and national conferences are a clear recognition of the candidate’s professional qualities as a researcher both in Bulgaria and abroad.

4. Evaluation of the candidate’s personal contribution

Given the high level of competence and extensive professional experience of Assoc. Prof. Dr. Atanasova, I have no doubt that the obtained results and the formulated contributions are her personal achievement.

5. Critical remarks and recommendations

I have no critical remarks regarding the content of the documents submitted for the competition.

CONCLUSION

The documents and materials submitted by Assoc. Prof. Dr. Stoyanka Nikolova Atanasova **comply with all** the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for its Implementation, and the Regulations for the Development of the Academic Staff of University of Plovdiv “Paisii Hilendarski”.

The candidate has presented a considerable number of scientific works published after those used for obtaining the educational and scientific degree “Doctor” and for the competition for the academic position of “Associate Professor”. The candidate’s works contain original scientific and applied scientific contributions that have received international recognition, and all publications have appeared in journals referenced and indexed in global scientific databases. The scientific and teaching qualifications of Assoc. Prof. Dr. Stoyanka Nikolova Atanasova **are unquestionable**.

The results achieved by Assoc. Prof. Dr. Stoyanka Nikolova Atanasova in teaching and research **fully meet** the minimum national requirements and the additional requirements of the Faculty of Chemistry, adopted in accordance with the Regulations of PU for the application of ADASRB.

After reviewing the materials and scientific works submitted for the competition, and considering the analysis of their significance and the scientific and applied scientific contributions they contain, I find it well-justified to give my **positive** evaluation and to recommend that the Scientific Jury prepare a report proposing to the Faculty Council of the Faculty of Chemistry the election of Assoc. Prof. Dr. Stoyanka Nikolova Atanasova to the academic position of “Professor” at University of Plovdiv “Paisii Hilendarski” in the area of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.2. Chemical Sciences (Organic Chemistry, Bioorganic Chemistry).

27.02. 2026

Opinion prepared by:
Prof. Ginka Antova, PhD