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O P I N I O N

by **Irini Atanas Doytchinova - Tsekova,** DSc.,

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on the materials submitted for participation in the competition
for occupying the academic position of "Associate Professor"
at the Institute of Organic Chemistry with Centre of Phytochemistry (IOCCP),
Bulgarian Academy of Sciences (BAS)
in the field of higher education 4. Natural Sciences, Mathematics and Informatics,
professional field 4.2. Chemical Sciences,
scientific specialty Organic Chemistry

The Head Assistant Dr. Neda Orlinova Anastassova from the Laboratory of Structural Organic Analysis, IOCCP-BAS, is the only candidate in the competition for "Associate Professor", announced in the State Gazette, issue 40 of 16.05.2025 and on the website of IOCCP-BAS.

1. General presentation of the procedure and the candidate

Only one candidate has submitted documents for participation in the announced competition: Head Assistant Dr. Neda Orlinova Anastassova from the Laboratory of Structural Organic Analysis, IOCCP-BAS.

The set of materials submitted by Dr. Anastassova on a cloud storage complies with the Rules for the Development of the Academic Staff at IOCCP and meets the criteria of IOCCP-BAS for occupying the academic position of "Associate Professor."

The candidate, Head Assistant Dr. Neda Anastassova, has submitted a total of 17 scientific publications and a list of 13 research projects. I accept for review the submitted documents which are outside the PhD thesis and review them in the final evaluation. The distribution of the scientific publications according to the journal quartiles is as follows: 9 in Q1, 5 in Q2, 1 in Q3, and 2 in Q4. Abstracts of 52 participations in scientific conferences in Bulgaria and abroad have also been presented.

I have no objections to the documents presented.

Brief biographical data of the candidate

Dr. Anastassova holds two Bachelor's degrees, one Master's degree, and one PhD in Chemistry from the University of Chemical Technology and Metallurgy in Sofia. In 2012, she joined the Laboratory of Structural Organic Analysis at IOCCP-BAS, initially as a chemist, later becoming Assistant and then Hed Assistant Professor. She has undergone training in computational and experimental methods at the universities of Lisbon, Bologna, and Barcelona, which she cleverly calls in her CV "scientific expeditions". She has participated in the development of a specialized electronic library for the study of artistic materials, identification, and preservation of Bulgarian cultural heritage using infrared spectroscopy (libra.orgchm.bas.bg) and is co-founder of a small cosmetics company. She is the author of 26 scientific publications in total, cited 265 times (Scopus accessed on 24.08.2025), with h-index 8. She has received three awards for best poster and one for best presentation at various international conferences. She is also granted the Acad. Yuhnovski Award for Outstanding Young Scientist in Organic Chemistry (2019) and the award for Best Popular Science Article in the journal BG Science (2022).

Personal impressions

I do not know Dr. Anastassova personally, but the scientific production presented in the competition talks about a determined and focused young scientist with already established achievements and promising scientific potential. I will follow her professional development with interest.

2. General characteristics of the candidate's activity

Evaluation of the candidate's scientific and applied research activity

In group of indicators C (Habilitation thesis – scientific publications), a habilitation thesis is presented, including the design, synthesis, and biological evaluation of 40 new benzimidazole-indole hybrids with multitarget activity for the therapy of neurodegenerative diseases. A wide range of methods were applied – organic synthesis, spectroscopic and structural analyses, cell and animal models, as well as quantum-chemical calculations. The obtained results are original, significant, and demonstrate clear structure–activity relationships. Lead structures with proven neuroprotective and antioxidant potential have been identified.

The thesis is based on 5 scientific publications in Q1 journals, two of which (*Antioxidants* and *Neural Regeneration Research*) have impact factors above 6. In four of these articles, Dr. Anastassova is first author, and in the fifth, she is second author. Thus, in this group of indicators she accumulates 125 points, exceeding the required minimum of 100 points, according to Appendix 1 of the Rules for the Acquisition of Academic Degrees and Occupation of Academic Positions (RAADOAP) at IOCCP-BAS and the national regulations for the application of ZRASRB.

The remaining 12 articles are included in group of indicators D. Four of them are published in Q1 journals (4 × 25 pts = 100 pts), five in Q2 journals (5 × 20 pts = 100 pts), one in a Q3 journal (1 × 15 pts = 15 pts), and two in Q4 journals (2 × 12 pts = 24 pts), or a total of 239 points, exceeding the required minimum of 220 points, according to Appendix 1 of RAADOAP–IOCCP-BAS. Here, Dr. Anastassova is first author in 5 and second author in one

publication. Her contributions in these articles can be summarized in two directions: (i) design, synthesis and characterization of new biologically active compounds (publications 1–6, 8–12), and (ii) quantum-chemical calculations for optimizing molecular geometry and elucidating the mechanisms of antioxidant activity of the newly synthesized compounds (publications 2, 7, 12). The obtained results demonstrate a consistent and purposeful scientific approach, combining experimental and theoretical methods. This integrated approach contributes to a deeper understanding of the relationships between chemical structure and antioxidant activity of the new compounds.

In total, Dr. Anastassova is first or second author in 11 out of the 17 articles (65%) submitted in the competition. This testifies to the strong personal contribution of the candidate both in conducting the research and in preparing and presenting the obtained results.

The list of citations included in the competition and not submitted in other competitions, contains 210 references for the period 2019–2025, bringing 420 points in group of indicators E, where the required minimum is 70 points. My reference in Scopus on 24.08.2025 shows 265 citations (excluding self-citations) of all papers by Dr. Anastassova and h-index of 8.

The scientific production of Dr. Anastassova, presented in this competition, has been funded by 13 projects, in 5 of them she is a principal investigator. Five projects are funded by the National Science Fund, two by the "Young Scientists and Postdoctoral Researchers" program of the Ministry of Education and Science, one by the Medical Science Council at the Medical University of Sofia, one under the National Roadmap for Research Infrastructure, and others funding programs.

The results of Dr. Anastassova's research in the period 2018–2025 have been presented in 52 scientific communications (oral presentations and posters) at 41 scientific forums in Bulgaria and abroad.

Evaluation of the candidate's teaching activity and training (teaching aids, lecture courses, work with students, undergraduates, and PhD students)

Dr. Anastassova has modest teaching experience, having led laboratory exercises in Organic Synthesis Technology at UCTM for three semesters, supervised or co-supervised two Bachelor's theses and one Master's thesis, and acted as mentor of young scientists.

Summary of points from the submitted materials:

Group of indicators	According to Appendix 1 of RAADOAP-IOCCP-BAS	Submitted by Dr. Neda Anastassova in the competition
A	50	50
B	-	-
C	100	125
D	220	239
E	70	420
F	-	1
J	$h \geq 5$	$h = 8$
Total:	**440 pts.**	**835 pts.**

The total number of points is 835, almost twice the minimum required for occupying the academic position of "Associate Professor," according to Appendix 1 of RAADOAP-IOCCP-BAS.

CONCLUSION

The documents and materials submitted by Head Assistant Dr. Neda Orlinova Anastassova meet all requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the regulations for its implementation, the rules of BAS, and the internal rules of IOCCP-BAS.

The candidate has presented a satisfactory number of scientific papers, published after her PhD degree and competition for the academic position of Head Assistant. The candidate's publications contain original scientific and applied contributions, which have received international recognition, being published in journals issued by international academic publishers. The scientific qualification of Dr. Anastassova is beyond doubt.

The scientific results achieved by Dr. Neda Anastassova fully comply with the specific requirements of the Rules of IOCCP-BAS for the application of ZRASRB.

After reviewing the submitted materials and scientific publications, analyzing their significance and the theoretical, methodological, and applied contributions they contain, I find it justified to give my **positive evaluation** and to recommend to the Scientific Jury to prepare a report-proposal to the Scientific Council of IOCCP-BAS for the election of Head Assistant Dr. Neda Orlinova Anastassova to the academic position of Associate Professor at IOCCP-BAS in the professional direction 4.2. Chemical Sciences, scientific speciality Organic Chemistry.

26 August 2025

Sofia Reviewer:

(Prof. Irini Doytchinova)