

STATEMENT

by Prof. Dr. Valerij Christov Christov, Konstantin Preslavsky University of Shumen, in regard to the materials submitted to participate in the procedure for the Academic Position *Professor* in the Faculty of Chemistry and Pharmacy at Sofia University "St. Kliment Ohridski" (FCF-SU) field of higher education **4. Natural Sciences, Mathematics and Informatics**, professional field **4.2. Chemical Sciences**, scientific major **Organic Chemistry - Organic Synthesis**

It is Assoc. Prof. Rositsa Dimitrova Nikolova, PhD, from the Department of Organic Chemistry and Pharmacognosy at FCF-SU being the only candidate to participate in the competition for *Professor*, announced in State Gazette no. 52 of 2nd July 2019 and on the website of the FCF-SU for the needs of the Department of Organic Chemistry and Pharmacognosy. Currently, Assoc. Prof. Rositsa Nikolova is a head of the Department of Organic Chemistry and Pharmacognosy.

General information

The set of electronic materials submitted is in compliance with the The Regulation on the Terms and Procedure for Acquisition of Academic Degrees and the Occupation of Academic Jobs at SU and includes all administrative and scientific documents necessary for the procedure. The applicant Assoc. Prof. Rositsa Nikolova has presented a total of 44 scientific publications (in Scopus - 34), 33 are published in foreign referred journals, 2 – in Bulgarian journals and 4 - in proceedings of scientific conferences. The scientific production includes two books for students, two textbooks and one book in Chemistry and Environmental Protection for students, issued in the period 2008-2019.

The total number of publications for the participation in this procedure for *Professor*, that Assoc. Prof. Nikolova has published after acquiring the academic position of Associate Professor (2009), is 22. 16 are published in referred foreign journals, in proceedings of scientific conferences - 2 and 4 textbooks.

Prof. Nikolova has presented a habilitation work on the topic "3-Substituted coumarins and 1,2-benzoxaphosphorins as precursors of bioactive compounds", which includes part of her research activity. It is based on 93 original scientific articles, four of which are written by the Assoc. Prof. Nikolova.

A list of participations in 57 scientific conferences in Bulgaria and abroad including 28 oral presentations and 62 posters was submitted.

Assoc. Prof. Nikolova was a head of 13 successfully evaluated projects funded by the Sofia University Research Fund. Currently, she is managing another one funded by the same Research Fund. She is a member of 9 project teams and at the same time she is a head of two projects funded by the Research Fund within the Ministry of Education and Science. She is a board member of two projects funded under FP7, Everest and BeyondEverest and one under H2020 MaterialsNetworking.

A number of evidences of the expert qualities of Assoc. Prof. Nikolova as a reviewer, participation in scientific juries and expert groups for program accreditation, organizer of scientific events, Chair of the Scientific Research Fund of Chemical Sciences at the Scientific Research Fund are presented.

General information on applicant's activity

The presented materials proves an active and high quality research work. The articles are divided according to the relevant Q factors: the papers in journals with Q1 are 6, with Q2 – 7, with Q3 – 2 and 1 paper is in journal with Q4. The following papers in highly estimated scientific journals make a great impression: *Molecules* (Q1, 3 papers), *RSC Adv.* (Q1, 1 paper), *Phys. Chem. Chem. Phys.* (Q1, 1 paper), *J. Phys. Chem.* (Q1, 1 paper), *Synlett* (Q2, 1 paper), *J. Phys. Org. Chem.* (Q2, 1 paper). The papers could be grouped by the number of co-authors as follows: single – 1 paper; with one co-author - 3 papers, with two co-authors - 5 papers; with three co-authors - 2 papers and more than three co-authors - 7 papers. In three articles Assoc. Prof. Nikolova is the first author, in five ones - the second author, in 8 ones - the third author and in one article she is the fourth author. She is a corresponding author of 7 articles.

The submitted information concerning her overall academic activity shows that Assoc. Prof. Nikolova has lectures in *Organic Chemistry*, part I and part II with students in Bachelor Degree in *Chemistry*, *Ecochemistry* and *Biology and Chemistry* majors. Moreover, she has developed lectures on *Organic Chemistry Part II* and *Cosmetic Products and Care* intended for Master Degree students in *Pharmacy*, *Organic Materials*; lectures on *Cosmetic Products* for intended for Master Degree students in *Cosmetics and Household Chemistry*; lectures on *Active Ingredients in Perfumery and Cosmetics* intended for Bachelor degree students in all chemical majors; and lectures on *Organic Chemistry Part I* intended for Bachelor Degree students in *Computer Chemistry* major. Assoc. Prof. Nikolova is a Chairman of the State Examination Committee for the Bachelor Degrees of the FCF and the Admission Examination Committee for Masters from 2016 until now. She takes part in the preparation of the state examination tests for undergraduate students. Assoc. Prof. Nikolova was a supervisor and co-supervisor of one PhD candidate who successfully defended her thesis and one PhD student who will supposed to defend the PhD thesis. Also, she supervised 12 graduates students from the Department of Organic Chemistry and Pharmacognosy for the period 1993-2019 and the research practice of eight students for the period 2000-2019. In the last four academic years Assoc. Prof. Nikolova has a significant workload (from 360 to 408 teaching hours), despite her duties as Head of the Department of Organic Chemistry and Pharmacognosy.

Scientific contributions and citations of the applicant

The publications presented by Assoc. Prof. Nikolova show that her research activity was carried out on the topic of the procedure. They are in the field of organic chemistry and organic synthesis. A major part of the research is oriented towards the development of new methods for the synthesis of substituted coumarins and their phosphorus analogues with potential biological activity, reactions of 3-substituted coumarins with nucleophilic reagents, cycloaddition reactions and tandem reactions. Spectral studies on part of the newly obtained substances and their metal complexes have been carried out using spectral methods. The specific features of quantum-chemical studies have been used to identify the mechanisms of ongoing interactions as well as the role of various factors on their interaction and selectivity. In my opinion, the works of Assoc. Prof. Nikolova are rather fundamental in the field of organic synthesis, albeit with practical focus.

The gained scientific results by Assoc. Prof. Nikolova have been reflected in the chemical journals, with a total number of 219 citations noted, 121 of them in Scopus. The list of noted citations of the scientific publications for participation in the competition includes 79 issues

(according to Scopus) of 23 articles. Almost all citations from foreign authors could be found in published their articles published in some of the most renowned high impact factor chemical journals. The applicant did not provide a photocopy of the articles in which her works were cited, which is why I cannot judge the nature of the citations, that is, whether they were just references, whether they were positive or negative, but I suppose and do believe that all or most of the citations are positive.

The materials presented are confirmation of a consistent and thorough research work carried out by Assoc. Prof. Nikolova over the years. The fact that she worked in cooperation with other researchers does not call into question the personal contribution and competence of the applicant.

Personal impressions

My personal impressions from Assoc. Prof. Nikolova completely correspond with the analysis of the submitted materials to the current procedure. I have attended some of her conference presentations. I have been a number of scientific juries with her. Further more, I had argued with her on a number of scholarly issues and had excellent impressions of her organizational, academic and professional background. Undoubtedly, she has excellent theoretical and experimental background, which, combined with her dedication, hard work, original scientific ideas and capacity for their realization, I can conclude that they were very fruitful in the realization of her research work.

Conclusion

The documents and materials submitted by Assoc. Prof. Dr. Rositsa Nikolova meet all the requirements of the Regulations on acquiring academic degrees and occupying academic positions at the SU. The applicant has submitted a significant number of scientific papers published after the acquisition of the academic title of Associate Professor. The applicant has substantial scientific contributions in the field of organic chemistry and organic synthesis, that has received international recognition. The scientific and academic qualification of Dr. Rositsa Nikolova is undoubtedly highly appreciated. The results achieved in the research and academic activities correspond to the specific requirements adopted in the Recommendations on the criteria for acquiring academic degrees and occupying academic positions at the SU in regard to the professional field *Chemical Sciences*.

Once I have read the materials and scientific papers submitted and made an analysis of their significance and the scientific contributions contained in them, I find it worthwhile to give my positive assessment and to recommend to the Scientific Jury to make a report to the Faculty Council of the FCF to elect **Assoc. Prof. Dr. Rositsa Dimitrova Nikolova** for the Academic Position *Professor* in the FCF in the Professional Field 4.2. **Chemical Sciences**, Scientific Specialty **Organic Chemistry - Organic Synthesis**.

25. 10. 2019
Sofia

Member of the Scientific Jury:
(Prof. Dr. Valerij Christov, PhD, DSc)