ATTITUDE

of Assoc. Prof. Dr. Svetlana Milcheva Momchilova -
Institute of Organic Chemistry with Centre of Phytochemistry (IOCCP)-BAS,
about: the documents submitted for participation in **the competition** for the occupation of the academic position of "**Professor**" in IOCCP-BAS in the field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical sciences, scientific specialty "Bioorganic chemistry, chemistry of natural and physiologically active compounds", for the needs of **the laboratory "Chemistry of natural products"**,
announced in the State Gazette No.43 / 31.05.2019 and on the website of IOCCP-BAS

Only one candidate has applied for participation in the competition, namely Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova from Lab. "Chemistry of Natural products" at IOCCP-BAS. Assoc. Prof. Trendafilova-Savkova has presented all the required documents in due time in accordance with the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for its application, the Regulations of the BAS and the IOCCP-BAS on the conditions and the procedure for the acquisition of scientific degrees and occupation of academic positions.

Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova has completed her higher education at the Faculty of Chemistry of Sofia University “St. Kl. Ohridski” in 1991 as a Master of Science (Organic and Analytical Chemistry). In 1997, she received her PhD degree at IOCCP-BAS after defence of the thesis "Sesquiterpene lactones in some Bulgarian medicinal plants from Asteraceae family". Since 1992, and for the time being, she has been working in the Laboratory "Chemistry of Natural Products" at IOCCP-BAS, consecutively as a chemist-specialist, research associate (RA) III degree (1993), RA II degree (1996), RA I degree (2004), and in 2011, after winning a competition, she was elected Associate professor.

Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova participated in the competition for Professor with 13 scientific publications as an equivalent number of articles for habilitation work - indicator V (point 4 in Table 2 for field of higher education 4. Natural sciences, mathematics and informatics in the Regulations for application of ADASRB and in the Regulations for Occupation of Academic Positions at IOCCP-BAS), and with 20 scientific publications of indicator G, of a total number of publications - 80, 51 of which are out of the competition for Associate professor and her dissertation for "doctor" degree. Eight from the scientific publications presented in this competition are in journals of category Q1 (3 of indicator V and 5 of indicator G), 12 are in journals of Q2 (8 of V and 4 of G), 9 are in journals with Q3 (2 of V and 7 of G) and 4 are in journals of Q4 (indicator G). A list of 250 citations noted in the Web of Science and Scopus (after the "Associate Professor" competition) was also presented; h-index 11.

The active research activities of Assoc. Prof. Trendafilova-Savkova include the management of 4 projects, 2 of which are funded by the Bulgarian National Science Fund, and 2 international

projects of equivalent exchange (EE) type (with Serbia and Turkey), as well as her participation in 21 other projects, 9 of which are international (5 of EE type). She has attended at international conferences and symposia with 60 posters and 3 oral presentations. Also, she was a scientific consultant of 1 PhD student at University of Food Technologies - Plovdiv, scientific supervisor of 4 graduate students (2 from the Faculty of Chemistry and Pharmacy of Sofia University "St. Kl. Ohridski" and 2 from the University of Chemical Technology and Metallurgy - Sofia) and supervised 2 specialists in projects "Student Practices".

Thus, Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova significantly exceeds the minimum requirements of the Regulations for occupying the academic position of "Professor" in IOCCP-BAS.

The scientific work of Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova in the field of phytochemistry includes interdisciplinary research in the following areas:

1. *Phytochemical investigations of medicinal, aromatic, endemic, in vitro cultivated and unexplored plants in order to detect new biologically active secondary metabolites and search for chemotaxonomic as well as structure-biological activity relationships.* These studies are related mainly to the isolation and structural determination of sesqui-, di-, and triterpenoids, flavonoids, coumarins, furanocoumarins, and phenolic acids in plants of the Asteraceae, Rosaceae, Apiaceae, and Araceae families. Polar extracts from different parts of plants have been studied in details, with individual compounds isolated and structurally characterized. It was found that some of them were newly discovered natural substances, while others were discovered for the first time in the respective plant species. The results are also important from a taxonomic point of view.

2. *Preparation of essential oils from aromatic and medicinal plants, characterization of their main components and searching for chemotaxonomic and other relations.* More than 200 components were analyzed by using GC and GC-MS in order to reveal chemotaxonomic dependencies, correlations between chemical content and ecological conditions as well as assessment of the influence of the plant growth regulators on accumulation of certain components in *in vitro* cultures.

3. *Application of modern methods and techniques for extraction of biologically active compounds from medicinal plants.* Experiments were done to optimize the conditions for extraction of biologically active substances from medicinal plants.

4. *Development of methods for quantitative analysis of biologically active compounds in medicinal plants.* GC method was used for the quantitation of sesquiterpene lactones in herb *Arnica montana*. The sesquiterpene lactone 8α-(5’-hydroxyangeloyl)-salonitenolide was measured in endemic plant *Centaurea davidovii Urum.* by HPLC. Spectrophotometric methods were applied for determination of phenolic compounds and flavonoids in *Centaurea davidovii Urum*., *Artemisia alba, Inula britannica* and *I. oculus-christi*, as well as of tannins in species of genus *Alchemilla*. NMR spectroscopy was used for quantitative determination of furanocoumarins in species of genus Heracleum.

Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova has stated her intention to continue scientific investigations in these areas. With her experience and skills in phytochemistry and analysis, I have no doubt that her future research will be still more successful.

CONCLUSION

Summarizing the results of the research activities of Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova, it can be concluded that they contain new data and contribute to the enrichment of the existing knowledge in the field of phytochemistry. This, as well as satisfying all the requirements of the Regulations for the occupation of the academic position of "Professor" in IOCCP-BAS, gives me a reason for positive assessment and to recommend the Scientific Jury to propose to the Scientific Council of IOCCP-BAS to elect Assoc. Prof. Dr. Antoaneta Trendafilova-Savkova as a professor in the professional field 4.2 "Chemical sciences", scientific specialty "Bioorganic chemistry, chemistry of natural and physiologically active compounds".

09.09.2019 г.
Sofia

Signature:
(Assoc. Prof. Dr. Svetlana Momchilova)