

## OPINION

by Assoc. Prof. Milena Tihomirova Nikolova PhD, Institute of Biodiversity and Ecosystem Research, BAS of the materials submitted for participation in the competition to hold the academic position of 'associate professor' at the Institute of Organic Chemistry with the Center for Phytochemistry (IOCCP), BAS professional direction 4.2. Chemical sciences, scientific specialty "Bioorganic chemistry, chemistry of natural and physiologically active substances"

In the competition for 'Associate Professor', announced in the State Gazette, no. 102 of 08.12.2023 and on the website of IOCCP, BAS, as a candidate participates Chief Assistant Tsvetelina Emilova Doncheva PhD from the Institute of Organic Chemistry with the Center for Phytochemistry (IOCCP), BAS

Dr. Doncheva obtained a master's degree in "Biotechnologies", at the University of Chemical Technology and Metallurgy, Sofia, Bulgaria, as well as the educational and scientific doctoral degree in the scientific specialty "Bioorganic Chemistry, Chemistry of Physiologically Active Natural Products with a PhD thesis on " Alkaloid composition of species of tribe Datureae". The candidate's professional experience has been carried out at the IOCCP-BAS since 1999.

All materials for the competition have been prepared following the current regulatory documents: the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation as well as relevant regulations of IOCCP- BAS. 20 scientific works were presented, grouped according to the national minimum requirements under Professional direction 4.3. Chemical sciences. Of these, one abstract of PhD thesis is related to the acquisition of the educational and scientific doctoral degree and refers to "A" Group of indicators (50 points). Six (2 x Q2; 4 x Q3) publications are equivalent to a habilitation thesis (Group "B") with a total numerical value of 100 points (with a required 100). Group "D" includes 13 scientific publications (2 in Q1, 5 in Q2, 3 in Q3, 2 in Q4) and 1 book chapter with a total numerical value of the respective quartiles of 234 points (with a required 220). Group "D" includes a list of 150 established citations in scientific publications, referenced and indexed in Web of Science and Scopus with a total numerical value of 300 points (out of the required 70). In group "F", the applicant's h-index is 7 (Scopus, without self-citations), with a minimum requirement of  $\geq 5$ .

The contribution report submitted is well organized and clearly and accurately reflects the applicant's research achievements. Dr. Doncheva's scientific research and contributions are in the field of chemistry of natural substances, with a main emphasis on alkaloids - isolation and identification, biological and pharmacological activity and their importance for chemotaxonomy and chemoecology. Isoquinoline-type alkaloids are the most often studied in various plant species belonging to the genera: *Leptopyrum*, *Hypocoum*, *Papaver*, *Pandanus* and *Thalictrum*. Among Dr. Doncheva's significant achievements are the isolation of **34** individual compounds, of which **23** were discovered for the first time in the respective species, and **3** were newly discovered natural compounds. As a result of the studies on the alkaloid composition of species of the genera *Glaucium*, *Fumaria*, *Corydalis*, *Alkanna*, *Hypocoum*, dependencies of importance for the taxonomy and ecology of the species have been established. The topic of the presented scientific works clearly outlines the scientific research profile of the candidate. Dr. Tsvetelina Doncheva is an established expert in the field of phytochemistry and in particular in the analysis of alkaloids. In addition, the candidate develops teaching activities, she has been the supervisor of two graduate students and a consultant to one doctoral student abroad. The management of 3 international projects and her participation in 9 international and 5 national projects complement her professional characteristics with teamwork skills. Dr. Doncheva is part of the team that has registered a utility model. The candidate has a clear vision for his future development.

In conclusion, the presented scientific production evaluated by scientometric indicators and the significance of the contributions meets the national requirements for occupying the academic position "Associate Professor" in the relevant professional field, determined by the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Rules for its Implementation, as well as the relevant Rules of the IOHTCF / BAS. This, together with the undoubted professional qualification of Dr. Doncheva, gives me the reason to confidently express a positive assessment and to recommend to the Scientific Jury to prepare a report-proposal to the Scientific Council of IOCCP-BAS for the election of ch. assistant professor Dr. Tsvetelina Doncheva at the academic position of 'associate professor' at IOCCP-BAS by professional direction professional direction 4.2. Chemical sciences, scientific specialty "Bioorganic chemistry, chemistry of natural and physiologically active substances"

14.04.2024

Sofia

Prepared the opinion: .....

(Assoc. Prof. Milena Nikolova)