OPINION

from Corresponding Member Atanas Ivanov Pavlov Dsc, professor at the Institute of Microbiology at BAS, professor at the University of Food Technology at BAS

of the materials submitted for participation in the competition for the academic position of 'Associate Professor' of the Institute of Microbiology "Stefan Angelov" – BAS

In the competition for 'associate professor', announced in the State Gazette, issue 29 of 09.04.2021 and on the website of the Institute of Microbiology for the needs of the laboratory "Extremophilic microorganisms", Department of General Microbiology at the Institute of Microbiology at BAS, as a candidate participates Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova, a scientist from the same laboratory.

1. General presentation of the procedure and the candidate

By order № I74 of 07.06.2021 of the Director of the Institute of Microbiology at BAS (IMikB-BAS) I was appointed a member of the scientific jury of a competition for the academic position of 'associate professor' at IMikB-BAS in the field of higher education 4.0 . Natural sciences, mathematics and informatics, professional field 4.3. Biological Sciences (Microbiology-Extremophilic Microorganisms), announced for the needs of the Laboratory "Extremophilic Microorganisms", Department of General Microbiology.

Only participant has submitted documents for participation in the announced competition: Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova.

The set of materials presented by Dr. Nadia Radchenkova is in accordance with the Regulations for the development of the academic staff of IMIKB-BAS, and includes all required documents.

The candidate Dr. Nadia Radchenkova has submitted a total of 23 scientific papers, of which 21 scientific publications (15 referenced in WoS/Scopus and 6 in other refereed journals) and 2 book chapters. All 23 scientific papers that are outside the PhD dissertation and are considered in the final evaluation, as well as 9 research projects are accepted for review. The distribution of scientific papers by relevant sections, in the country and abroad, is as follows: 8 publications in journals from the first quartile; 3 publications in magazines from the second quartile; 4 publications in a magazine from the third quartile and 6 publications in magazines that are not referenced in WoS/Scopus; two chapters of books. The impact factor of the publications submitted for this competition is 30,732.

Ch. Assistant Professor Dr. Nadia Radchenkova graduated with a master's degree in "Information and Management Technologies" at the University of Chemical Technology and Metallurgy in 1999 and obtained an educational and scientific degree "Doctor" in 2014 at

IMicB-BAS, majoring in "Microbiology" and topic of the dissertation "Production and characteristics of exopolysaccharide(s) synthesized from thermophilic strain Aeribacillus pallidus 418". Dr. Nadia Radchenkova began her career in 1995 in IMikB-BAS, where until now he has successively held the positions: specialist, assistant and chief assistant in the Laboratory of Extremophilic Microorganisms. According to the SCOPUS database (Author ID: 55773556600) Ih. Assistant Professor Nadia Radchenkova has 19 refereed scientific papers and H-index 9, without auto-citations.

2. General characteristics of the candidate's activity

The publications presented in connection with this competition, classified by headings above, define Dr. Radchenkova as a young, intensively working scientist. Confirmation of this statement is the H index of the candidate - 10, as well as the citation of her scientific papers (330 citations). These scientometric indicators would not have been achieved without comfortable research funding. Dr. Radchenkova has participated in 9 research projects, 6 of which are international. The candidate presented a list of 20 presentations at scientific forums in Bulgaria and abroad. This fact is especially important for increasing the recognition of the scientific work of Dr. Radchenkova among colleagues working in this field of science. The results achieved by the candidate fully and punctually cover the minimum national requirements and the additional requirements of IMicB-BAS for holding the academic position of "Associate Professor", as the required points in the groups of indicators directly related to the quality of scientific results (D and E) are significantly exceeded. I would especially like to note the categorical coverage of the additional criteria of IMicB-BAS, the requirements for the implementation of which during some of the last competitions were slightly underestimated.

Dr. Radchenkova's contributions can be defined as "novelty for science", "confirming previously stated" and "applied". In particular, I would like to note: 1) the creation of a collection of thermophilic and halophilic bacterial producers of exopolysaccharides isolated from Bulgarian hot springs and salt niches; 2) the detection of xanthan lyase, gelan lyase, arabinase and phytase activities in halophilic bacteria and 3) the analysis of the genome of the thermophilic species Brevibacillus, the discovery of major genes responsible for the biosynthesis of exopolysaccharides and the related generation of a hypothetical mechanism their metabolism.

Such good results would not be possible without the creative atmosphere of the group in which Dr. Radchenkova works. I hope that the candidate has absorbed all the good practices of Prof. Kamburova, which would ensure her successful career in the future.

As far as personal contribution can be assessed when working in such a well-organized scientific group, Dr. Radchenkova is a leading author in over 20% of the presented scientific papers. More importantly, however, its thematic profile is clearly visible, namely "the biosynthesis of exopolysaccharides and extremozymes from thermophilic and halophilic microorganisms". Topics with a high degree of relevance and potential for development.

COMCLUSSION

The documents and materials submitted by Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova meet all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (RASRB), the Regulations for the implementation of the RASRB and the relevant Regulations of the Institute of Microbiology at BAS.

The candidate in the competition has submitted a sufficient number of scientific papers published after the materials used in the defense of ONS 'Doctor'. In the works of the candidate there are original scientific and applied contributions, which have received international recognition as a representative part of them are published in peer-reviewed journals. The scientific qualification of Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova is undoubted

Achieved by Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova results in research fully comply with the specific requirements of the Regulations of the Institute of Microbiology at BAS for the application of RASRB.

След запознаване с представените в конкурса материали и научни трудове, анализ на тяхната значимост и съдържащи се в тях приноси, намирам за основателно да дам своята **положителна** оценка и **да** препоръчам на Научното жури да изготви доклад-предложение до Научния съвет на Института по микробиология за избор на гл. ас. д-р Надя Стойчева Радченкова на академичната длъжност 'доцент' по област на висше образование 4.0. Природни науки, математика и информатика, професионално направление 4.3. Биологически науки (Микробиология-екстремофилни микроорганизми). After getting acquainted with the materials and scientific papers presented in the competition, analysis of their significance and their contributions, I find it reasonable to give my positive assessment and recommend to the Scientific Jury to prepare a report-proposal to the Scientific Council of the Institute of Microbiology for election of Ch. Assistant Professor Dr. Nadia Stoycheva Radchenkova for the academic position of 'Associate Professor' in the field of higher education 4.0. Natural sciences, Mathematics and Informatics, professional field 4.3. Biological sciences (Microbiology-extremophilic microorganisms).

July 2021 **Prepared the opinion**: .....

/Corresponding Member Atanas Ivanov Pavlov DSc/