

Opinion

by prof. Iskra Vitanova Ivanova,

member of the National Academy of Sciences according to the order of the Director of IMikB-BAS No. I - 70/30.05.2022

regarding: competition for the occupation of an academic position "Docent" in higher education field 4 "Natural sciences, mathematics, informatics"; professional direction 4.3. "Biological Sciences"; specialty "Microbiology - of new functional foods" for the needs of the "General Microbiology" Department, laboratory - "Microbial Genetics" of the Institute of Medical Sciences - BAS, published in SG no. 29 of 12.04.2022 Only one candidate took part in the competition for "Associate Professor": Ch. assistant Dr. Galina Dinkova Stoyancheva.

Brief biographical reference and evaluation of publication activity

Ch. assistant Dr. Galina Dinkova Stoyancheva was born on August 21, 1972. In 2006 successfully defended a dissertation work for ONS "doctor" on the topic "Combined approach for molecular-taxonomic characterization of lactobacilli" and since 2007 has been working as a chief assistant until now. Total work experience 24 years.

General description of the submitted materials for the competition.

The materials submitted by the only candidate ch. Associate Professor Galina Dinkova Stoyancheva fully meet the requirements of the competition and present the specific evidentiary part regarding the required criteria for the competition, as well as present the overall production of the candidate, both through lists of publications and citations, and through the text of the submitted contributions, the resume, etc. The presented documentation is extremely well organized and very detailed, including digital copies of the publications related to the participation in this competition, as well as their summaries in Bulgarian and English.

A total of 23 scientific works were submitted for participation in the competition for the academic position "associate professor" in the scientific specialty "Microbiology - of new functional foods", which were not used in the procedures for obtaining the educational and scientific degree "doctor" and for obtaining the the academic position "principal assistant".

1.. Criterion "A" - an abstract of a dissertation work is presented for awarding the educational and scientific degree "doctor" - 50 points;

2. Criterion "B" - 6 articles are presented, which do not repeat those presented for obtaining the educational and scientific degree "doctor" and for holding the academic position "chief assistant" (total number 109 points)

3. Criterion "D", includes 13 publications in publications that are referenced and indexed in world-renowned databases with scientific information (Web of Science and Scopus), which are in categories Q1 - Q4 (288 points)

4. Criteria "D" includes 303 citations in scientific publications, monographs, collective volumes and patents, referenced and indexed in world-famous databases with scientific information (Web of Science and Scopus) (606 points).

5. Dr. Stoyancheva presented two book chapters (30 points).

6. Dr. Stoyancheva has participated in 17 projects - 12 in national and 5 international projects. He is in charge of 4 projects.

The analysis shows that Dr. Galina Stoyancheva has a total of 1083 points out of the required 430.

Overview of the candidate's scientific and scientific-applied contributions

The contributions of the submitted materials for participation in the competition for the academic position of "associate professor" in the scientific specialty Microbiology-"Microbiology-development of new functional foods" can be grouped into two main directions:

-research on lactic acid bacteria related to the production of bacteriocins, new primers, selection of strains active against pathogens and producing active substances of a protein nature;

-study of the biodiversity of fungi inhabiting different habitats and molecular-biological study of catalases.

For the first time, specific primers were investigated in the works of Dr. Stoyancheva on lactic acid bacteria and an operon for the bacteriocin "gasericin A" was identified in the genome of the species *Lactobacillus crispatus*.

The author offers a wide palette of high-quality studies for new specific primers to detect the gene for the bacteriocin "helveticin" and the application of this gene as a phylogenetic marker is evaluated.

A *Lactococcus lactis* HV219 strain producing bacteriocin HV219, active against Gram-positive and Gram-negative bacteria, was isolated and the growth conditions and media composition required for optimal bacteriocin production were determined.

Lactobacillus strains were selected, isolated from a selection of clinical samples, which are active against pathogenic microorganisms and produce an active substance of a protein nature, and bacteriocin genes were found in their genome. The probiotic characteristics of ten lactobacilli strains isolated from clinical samples were evaluated.

For the first time, a study has been conducted on the biodiversity of fungi inhabiting different materials from historical monuments in Egypt, part of the world cultural heritage.

For the first time, a detailed molecular biological study of catalases from the Antarctic strain *Penicillium griseofulvum* P29 has been carried out. The complete sequencing and characterization of five catalase genes enables the development of new approaches in the production of temperature-sensitive catalase.

New specific primers for catalase genes in *Penicillium griseofulvum* species were designed. For the first time, the influence of temperature as a factor in the regulation of catalase gene expression in filamentous fungi was investigated.

More than 250 strains of filamentous fungi isolated from Magura cave, isolated from soils, numerous strains producing different enzymes were identified by sequence analysis.

Critical remarks and recommendations

To those presented by Ch. Assistant Professor Galina Dinkova Stoyancheva materials I have no critical remarks. They correspond to the theme of the competition, both in volume and quality. In addition, the documentation is designed very precisely and gives the opportunity to get a complete picture of all directions in the applicant's activity.

Summarizing everything said above, I can summarize that my assessment of the scientific research and teaching-teaching activities of Ch. Assistant Professor Stoyancheva is strongly positive.

Conclusion

The documents and materials presented by chap. Associate Professor Galina Dinkova Stoyancheva, meet all the requirements of the ZRASRB, the Regulations for the implementation of the ZRASRB and the additional requirements of the Institute of Microbiology, BAS. The achieved scientific and scientific-applied contributions of Ch. assistant dr. Galina Dinkova Stoyancheva are at a high professional level, which is confirmed by the list of publications with her participation in journals in the international databases Scopus and citation of results and participation in numerous projects. It is clear from the analysis that Ch. assistant professor Stoyancheva participated in the competition with a scientific production that, according to scientometric indicators, significantly exceeds the requirements for occupying the academic position "Docent". She is an established scientist in the field of microbiology, especially in the characterization of lactic acid microorganisms, has the ability to address current problems, get to the heart of them and present innovative ideas. Based on everything noted so far, I strongly recommend to the members of the honorable scientific jury, formed by decision of the Institute of Microbiology, BAS to award ch. Associate Professor Galina Dinkova Stoyancheva, the academic position "Docent" in professional direction 4. Natural sciences, mathematics and informatics, professional direction 4.3. Biological sciences, scientific specialty Microbiology of new functional foods.

Sofia, 15.08.2022

Prof. Iskra Ivanova