OPINION

on an academic position "professor"

presented to a scientific jury formed by order № 1-80 / 01-07-2020 of the Director of the Institute of Microbiology "Stefan Angelov", BAS

About: Announced competition for a professor in a professional field 4.3. Biological Sciences (Microbiology - Lactic Bacteria and Probiotics), (No. 47, May 22, 2020) for the needs of the Laboratory of Microbial Genetics, Institute of Microbiology, BAS.

Given by: Prof. Dr. Veneta Ivanova Groudeva, Department of General and Industrial Microbiology, Faculty of Biology, Sofia University

An application for participation in the announced competition was submitted by a single candidate - Associate Professor Svetla Trifonova Danova, DSc, from the Laboratory of Microbial Genetics of the Department of General Microbiology, BAS. All documents for the competition are prepared precisely and accurately and are presented according to the requirements

1. THE CANDIDATE'S PROFESSIONAL CAREER

Assoc. Prof. Svetla Trifonova, PhD, graduated Molecular and Functional Biology, specialization in General and Industrial Microbiology in 1987 at the faculty of Biology, Sofia University “St- Kliment Ohridski”. Between 1989-1994 she was a PhD student in the Department of General and Industrial Microbiology at the Faculty of Biology. Until 2000 she was a microbiologist in a project of the international program "Copernicus”, coordinator in Bureau for International Relations under the TEMPUS program, assistant in General Microbiology at the Department of General and Industrial Microbiology, Faculty of Biology. In 1995 she spent 6 months specialization in ENITIAA, Nantes, France. From 1999 to 2000 was a post-doctoral student at the same institution.

In 2000 joined Institute of Microbiology, Bulgarian Academy of sciences as researcher and is working in this institute up to now. In 2005 she became a senior researcher (associate professor). In 2015 she defended his dissertation for a doctor of biological sciences on "Biodiversity and probiotic potential of lactic acid bacteria from different ecological niches." She is currently an associate professor in the Laboratory of Microbial Genetics at the Department of General

Microbiology of the Institute of Microbiology. In 2006 was invited researcher in the Department of Food Microbiology at the University of Stellenbosch, South Africa and in 2018 he worked on a Joint Bulgarian-American project at Midwestern University, Phoenix, Arizona, USA. During of her education and professional development Assoc. Prof. Svetla Danova, DSc has acquired professional experience and skills in two main areas: research and teaching. The professional realization of the candidate so far is entirely related to the topic of the competition and reflects current and promising areas of general microbiology and in particular in the field of biology of lactic acid bacteria and probiotics. Assoc. Prof. Svetla Danova, DSc as a member of research team of the Institute of Microbiology actively participates in the scientific life of the institute. On the same time, she is a member of the Expert Council on Food Safety at the Ministry of Health of Bulgaria, independent expert at the Executive Agency for Promotion of Small and Medium Enterprises, external expert - microbiologist in the list of the Accreditation Commission and others. She is a member of the Union of Scientists in Bulgaria, a member of the Union of Biologists as well as a member of Bulgarian medical microbiology Association. In 2009 she was nominated by the Union of Scientists in Bulgaria with a diploma and a cash prize in a competition for high scientific achievements for research in the field of biodiversity and molecular characteristics of lactic acid bacteria.

2. ANALYSIS OF THE MATERIAL BY THE CANDIDATE FOR PARTICIPATION IN THE COMPETION

The analysis of the materials submitted for participation in the competition is in accordance with the state requirements for academic staff and the additional requirements of the Institute of Microbiology, BAS.

2.1. According State requirements

Parameters	Indicators	Requirements for professor	Data of the candidate
A	Indicator 1	**50**	**50**
B	Indicator 2	**-**	**100**
V	Indicator 3/4	**100**	**210**
G	Indicators 5-10	**100**	**613**
D	Indicator 11	**100**	**1062**
E	Indicator 12	**150**	**964**

The analysis of the materials submitted by the candidate shows that he has a total number of 125 publications as follows: papers in the journals with IF - 67; papers in journals without IF - 32; papers presented to congresses - 16; monographs and chapters from books - 7; teaching books - 3. The total IF is 66.29. Seventy-six publications are after the acquisition of the academic position of associate professor with a total impact factor of 52,829. The citations of the candidate's publications are up to 600, and 475 of them are after becoming the associate professor. Assoc. Prof. Svetla Danova has an intensive teaching activity. For the period 2005-2018 she had > 500 teaching hours of lectures and practical exercises at Sofia University and Chemical Technological University of Sofia.

Conclusion under 2.1:

The candidate fully meets the criteria of State requirements for academic possition "professor" and significantly exceeds these requirements.

2.2. According additional requirements of the Institute of Microbiology (after associate professor position

position	publications	Citations	Impact Factor	H-factor
Professor	20, 16 - first author	400	40	10
Candidate	27, 19 first author	531	66.290	13

The candidate has participated in scientific forums as follows: international forums with oral presentations - 25; international forums with poster presentations - 29; national forums with oral presentations - 13, national forums with posters -38. The candidate has an active project activity: leader of the four national projects, two international projects as well as member of team of the nine international and 13 national projects. The candidate is supervisor of six PhD students and twenty-four master and bachelor students.

Conclusion under 2.2:

The candidate fully meets all the additional requirements of the Institute of Microbiology for the academic position Professor.

3. BRIEF RESEARCH EVALUATION OF THE CANDIDATE

The candidate's research work is entirely devoted to the biology of lactic acid bacteria. This is no coincidence as these bacteria are the basis of healthy and functional foods and as probiotics are of considerable scientific interest. They are a source of new information on the mechanisms of

equilibrium in natural microbial populations as well as the human microbiome. A number of problems in the biology of these bacteria - taxonomy, genetics, physiology, ecology, biotechnological potential are the subject of the candidate's research work. A significant part of the candidate's work for the first time reveals various aspects of biodiversity, metabolic activity, probiotic potential of Bulgarian strains of lactic acid bacteria isolated from different habitats. Conditionally, the research can be grouped in two directions: Biodiversity, functional characteristics, technological significance and probiotic potential of lactic acid bacteria from different habitats and functional characteristics and probiotic potential of Lactic acid bacteria

A significant part of the research work is related to the taxonomic characteristics of the lactic acid bacteria using a combined polyphasic taxonomic approach and various culturally independent DNA methods. Species and intraspecific diversity among the milk microflora of healthy dairy products consumed for centuries have been studied in detail and confirmed by metagenomic analyzes. More than 150 original lactic acid bacteria strains have been identified and genotyped. The species diversity in the vaginal lactobacilli microbiota in Bulgarian women of reproductive age has been studied too.

An algorithm for complex assessment of newly isolated LCB as candidate probiotics has been developed. It has been successfully applied in in vitro assessment of the probiotic potential, for the first time in Bulgarian LCB, isolated from various dairy products. A model system in microplates has been created to evaluate the ability of lactobacilli to absorb prebiotics, their ability to participate in the composition of the new preparations. More than 200 Bulgarian strains were analyzed and evaluated for practical application. Bulgarian strains with bioprotective properties were selected also. An original scheme for characterization of biological and technologically significant properties in lactobacilli has been developed, allowing selection of probiotic cultures for application in the production of new dairy products with functional characteristics. In these areas, the candidate has serious original scientific contributions as well as fundamental and mythological ones. The results of the research, reflected in a large number of publications, participation of scientific forms. The research of the candidate is well known in the international scientific community (over 600 citations, invitations for joint research in renowned universities). It is obvious that the candidate has established himself as a good researcher and expert in biology of LCB and molecular biology in general.

4. PERSONAL OPINION FOR THE CANDIDATE

I have known Assoc. Prof. Svetla Danova since she was a student at the Faculty of Biology, where I was teacher on microbiology, taxonomy of microorganisms and other disciplines in the specialization of microbiology. Tempus training programs. I had the opportunity to identify the potential for research work of the candidate. Analyzing the materials of this competition, I find that our assessments of the capabilities of the candidate of science were quite correct. I am glad that the student has significantly surpassed his teachers and is now an established world scientist with extensive scientific contacts, excellent expertise in molecular biology, microbiology and biotechnology.

CONCLUSION

The presented scientific production and the active teaching activity of the only candidate in the announced competition for the academic position "Professor" Assoc. Prof. Svetla Trifonova Danova fully meets the requirements of and significantly exceeds them. The complex evaluation of the submitted materials, as well as the overall activity of the candidate gives me reason to convincingly propose to the scientific jury and the esteemed scientific council of the Institute of Microbiology at BAS to choose Assoc. Prof. Svetla Danova, DSc for **PROFESSOR** in professional field 4.3. Biological Sciences (Microbiology - lactic acid bacteria and probiotics), announced for the needs of the Department of General Microbiology, Laboratory of Microbial Genetics at Institute of Microbiology, BAS.

September 10.2020

Prof. Veneta Groudeva, PhD: