To the members of the scientific jury
Defined by Order No. I-80/01.07.2020
of the Director of Institute of Microbiology
Bulgarian Academy of Sciences

P O S I T I O N

OF

PROF. IVA STEFANOVA CHRISTOVA, MD, PhD, DSc

NATIONAL CENTER OF INFECTIOUS AND PARASITIC DISEASES

Competition to hold the academic position PROFESSOR

High education field 4. "Natural sciences, mathematics and informatics"

Professional field 4.3. "Biological sciences"

And scientific specialty "Microbiology"

For the needs of Department of Infectious Microbiology

Institute of Microbiology, Bulgarian Academy of Sciences

Announced in the State Gazette No. 47 of 22.05.2020

With a single candidate

ASSOCIATE PROFESSOR SVETLA TRIFONOVA DANOVA

DOCTOR OF BIOLOGICAL SCIENCES

CAREER DEVELOPMENT

Assoc. Prof. Danova is among the leading specialists in our country in probiotics, starter cultures, lactic acid bacteria and in particular production of biocins from lactic acid bacteria, functional foods. In 1987 she graduated from the Faculty of Biology of Sofia

University "St. Kliment Ohridski" with molecular and functional biology specialty. From 1989 to 1994 she was a full-time doctoral student at the Department of General and Industrial Microbiology at Sofia University "St. Kl. Ohridski". She successfully defended her PhD dissertation on "Studies on some aspects of the primary metabolism of *Streptomyces albogriseolus* 444 and its low-yielding variant in relation to the regulation of antibiotic production." She found that process of antibiotic formation is initiated when a certain ratio is reached in the activity of the enzymes that carry out the absorption of glucose. For the first time, NAD kinase, two types of ATPase have been isolated from antibiotic-producing streptomycetes and the role of Ca2 +, extracellular proteases and the self-produced antibiotic in the processes of regulation of differentiation and antibiotic formation in *Streptomyces albogriseolus* 444 has been proven.

Several successful long-term specializations in the leading microbiological laboratories in Nantes and Rennes, France followed, in which Svetla Danova improves methods for characterizing of biological activity of lactic acid bacteria, for obtaining and purifying of bacteriocins as well as studying genetic organization and quorum-sensing regulation of genes responsible for bacteriocin production. This is the basis for her upward career development.

Since the end of 2005 she has held academic position of "Associate Professor" in the Department of Microbial Genetics of IMicB, BAS. In 2006, she was invited as a researcher for 3 months in the Department of Food Microbiology at the University of Stellenbosch, South Africa. She was awarded a diploma and a cash prize for high scientific achievements in 2009 by the Union of Scientists in Bulgaria for 16 of her scientific publications on modern molecular approaches in characterizing biodiversity and biological activity of lactic acid bacteria. In 2015, she brilliantly defended her doctoral dissertation and obtained degree of Doctor of Biological Sciences with her extensive research on the biodiversity and probiotic potential of lactic acid bacteria from various ecological niches. In 2018, as part of a joint Bulgarian-American project funded by the Fulbright Bulgarian-American committee, she was invited researcher for 3 months at the Institute for Healthcare Innovations, Midwestern University, Phoenix, Arizona, USA.

Assoc. Prof. Danova has multifaceted expert activity as a member of the Expert Council for Food Safety at the Ministry of Health, an independent expert at the Executive

Agency for SMEs for the Promotion of Small and Medium Enterprises, external expert of the Accreditation Commission at the EA-BAS. She is a member of prestigious scientific organizations - Union of Biologists in Bulgaria, Union of Scientists in Bulgaria, Bulgarian Association of Microbiologists.

RESEARCH ACTIVITY

In the competition for professor, Assoc. Prof. Danova presents 180 scientific papers after holding the academic position of "Associate Professor", distributed as follows:

- Chapters from books and studios - 5, in 4 of which she is the first author;
- A textbook in Bulgarian and a textbook in English;
- Publications in international scientific journals with SJR-IF-28 with total IF 47,641;
- Publications in Bulgarian scientific journals with SJR - 16 with a total IF of 5,118;
- Publications in international scientific journals without impact factor - 14 pcs.
- Articles printed in full text in foreign peer-reviewed collections - 4 pcs;
- Articles printed in full text in Bulgarian referenced collections - 6 pcs;
- Papers presented by Assoc. Prof. Danova as an invited speaker at foreign scientific forums - 9 pcs.
- Reports and scientific communications at international scientific forums - 45 pcs.
- Reports and scientific communications at national scientific forums - 51 pcs.

Significant internationally recognized results have been achieved. We judge the recognition not only by the high impact factor of her publications, a total of 66,290, but also by the numerous citations of her works in prestigious international publications. She participated in the competition with 531 citations in Scopus and H-index 16 in Google Scholar (13 in Scopus).

Information on compliance with the criteria of IMicB-BAS for holding the academic position "Professor" shows that instead of the required after "associate professor" 20 pcs. publications with impact factor, monographs or published in full reports of international congresses, the candidate has 27 pcs. and is a leading or corresponding author of 19 of them while the requirement is for 16, as well as 531 citations instead of the required 400 citations

and the impact factor of her articles is 66.290 while the required is 40, her H-index is 16 while the required is 10, she has supervised 6 scientific-research projects while the required is 3 pcs. and has five successfully defended PhD students instead of the required two.

Assoc. Prof. Danova is an established scientist with high scientific achievements, who have received well-deserved respect among the international scientific community.

The main scientific contributions can be systematized as follows:

• *Characterization of the biodiversity and phylogeny of lactic acid bacteria from different ecological niches*

• *Functional characteristics and probiotic potential of lactic acid bacteria*

• *Assessment of the technological significance and application of Bulgarian lactic acid bacteria*

• *Study of benign microorganisms as part of understanding the mechanisms of healthy balance in the body and the basis for a new strategy in the fight for health and longevity.*

Participation in research projects

Assoc. Prof. Svetla Danova has been the leader of 6 research projects, 5 of which are after holding the academic position of "Associate Professor" and has participated in 23 projects, 14 of which after "Associate Professor". Most of them are funded by the Research Fund of the Ministry of Education and Science. Three of the projects are under the TEMPUS program, there are projects under Copernicus program, with the Institut Pasteur, INRA-Nantes, France, NATO and others. The presented data show that Assoc. Prof. Danova is a sought-after and preferred partner for joint research.

TEACHING ACTIVITY

Assoc. Prof. Danova is actively engaged in the management of bachelors, masters and PhD doctoral students. Only for the period 2005 - 2020 she is a scientific supervisor of 4 diploma theses of bachelors, 12 diploma theses of masters and of 6 PhD doctoral students, 5 of them already successfully defended. In addition, she leads 5 clubs and interns and participates in 2 training programs of UCTM and BF-SU.

CONCLUSION

Assoc. Prof. Svetla Danova, DSc. is the leading scientist in our country in the field of functional characterization and probiotic potential of lactic acid bacteria. Her developments for assessing technological significance and application of Bulgarian lactic acid bacteria are extremely important. She is a renowned and respected scientist with international recognition.

Summarizing the significant scientific contributions from her numerous scientific developments, highly appreciated by the scientific community, as evidenced by the huge number of their citations, I can confidently say that they fully meet and even exceed the quantitative and qualitative criteria of ZRASRB, the Rules for its application and the Rules of BAS for holding the academic position "Professor".

Based on all this, I recommend to the respected members of the scientific jury to support the candidacy and to propose to the Scientific Council of IMicB at BAS Assoc. Prof. Svetla Trifonova Danova, DSc. to be elected to the academic position "PROFESSOR" in the scientific specialty "MICROBIOLOGY" for the needs of the Department of General Microbiology, Institute of Microbiology at the Bulgarian Academy of Sciences.

07.09.2020 Signature:

/ Prof. Iva Christova, MD, PhD, DSc./