

To the honorable members of the  
Scientific Jury designated by  
Order No. I 83 / 01.07.2020  
of the Director of the ImicB

## OPINION

from

Assoc. Prof. Victoria Stefanova Levterova, MD, Head NRL "Molecular Microbiology" and  
Department of Microbiology of  
NATIONAL CENTER FOR INFECTIOUS AND PARASITIC DISEASES

Subject: Competition for the academic position of "ASSOCIATE PROFESSOR", in the field of higher education 7. Health and sports, professional field: 4.3 Biological sciences, scientific specialty: "Microbiology", for the needs of the Department of Infectious Microbiology, Laboratory "Cytotoxicity and signal transduction ", announced in NJ no. 47 of 22.05.2020 with the only candidate Chief Assistant Maya Margaritova Zaharieva, Ph.D.

I hereby declare that I have no conflict of interest within the meaning of Art. 4, para. 5 of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB). I have no common publications with Dr Maya Margaritova Zaharieva, Ph.D.

### **RECEIVED MATERIALS FOR REVIEW**

The only candidate in the competition is Chief Assistant Maya Margaritova Zaharieva, Ph.D. The presented documentation is complete and neatly arranged, according to the requirements of LDASRB. The candidate has submitted on paper and electronic media: administrative documents, incl. certificates and diplomas, official note for work experience in the specialty and study load, general list of scientific publications, reference for citations, author's reference for the contributions, habilitation reference, reference-declaration for fulfillment of the minimum national requirements for participation in the competition for academic position "Associate Professor", presented in the competition for Associate Professor.

### **CAREER DEVELOPMENT**

Maya Margaritova Zaharieva completed her higher education at the Faculty of Pharmacy, MU-Sofia, in 2001. From June 1, 2001 to September 30, 2001 she specialized financed by the program Erasmus / Socrates for graduate students at the German Center for Oncology Research, Heidelberg, where she worked on the experimental part of her thesis. From 2002 to 2004 she worked as a Master of Pharmacy at Sitonet Sofia Ltd., Queen Joanna

Hospital, Sofia in the field of transplantations. From 14.03.2003 to 30.09.2006 she is a full-time doctoral student headed by Prof. Dr. M. Karaivanova in the Department of Pharmacology, Pharmacotherapy and Toxicology, Faculty of Pharmacy, Medical University-Sofia. The experimental part of the dissertation, she developed within the program for doctoral students of the DAAD Foundation, in the German Center for Oncological Research, Heidelberg, Section "Toxicology and Chemotherapy" under the supervision of Prof. Dr. MR Berger, MD. The scientific degree "DOCTOR" in the scientific specialty: "Pharmacology", code 03.01.24 was awarded by the Higher Attestation Commission on 09.06.2008 for dissertation on "Study on the pharmacodynamic effects of erufosine in tumor-transformed and normal hematopoietic cells." Meanwhile, from 2002 to 2012, she works as a master pharmacist in several pharmacies in Sofia. From 2007 to 2010, she works in 2 projects, in one of which she is a manager. In 2012 for 6 months she has been a lecturer (assistant) in pharmacology at the Faculty of Medicine, Sofia University "Kliment Ohridski". In the period 2008 – 2016, Maya Zaharieva has been awarded with many foreign prizes, such as - for the best poster, for young scientist, etc. Maya Zaharieva began her career development at the Stefan Angelov Institute of Microbiology, Bulgarian Academy of Sciences in 2012 as a master pharmacist, assistant in microbiology and in 2014 she became chief assistant in microbiology.

## **RESEARCH ACTIVITY**

Chief Assistant Maya Zaharieva has presented for the competition 28 publications, 3 chapters from books and 36 participations in scientific forums, distributed as follows:

- The scientific articles in journals with CJCR-IF in which the candidate is the first author are 5, with a total IF of 8.055;
- A chapter from a book in which the candidate is the first author is presented on the international academic publishing house (Web of Science) ;
- One publication in a collection of international congress in which the candidate is the first author (published in full text);
- A publication in a journal with SJR in which the candidate is the first author ;
- The scientific articles in journals with JCR-IF in which the candidate is a co-author are 16.
- Two chapters of books are presented in which the candidate is a co-author;
- Two publications in a collection of international congresses in which the candidate is a co-author (published in full text) ;
- 36 participations in scientific forums at home and abroad were presented.

The personal contribution of the author is evidenced by the fact that Ch. Assistant Maya Zaharieva is the first author in 8 of her scientific works. From the author's reference submitted for the competition, 279 citations of 23 of her articles in prestigious international publications have been noted. This is a proof of the interest of the international scientific community in the developed problems and the achieved results. The analysis of the scientific production and the publishing activity of Ch. Assistant Maya Zaharieva shows that she is an active and productive researcher.

## **Evaluation of the scientific contributions and achievements of the candidate**

The main scientific contributions and achievements of the candidate can be grouped as follows:

1. Antineoplastic activity, cytotoxicity and signal transduction of extracts, BAS and synthetic compounds in malignantly transformed cell lines.
2. Antimicrobial activity of plant extracts, BAS and human neutrophil peptides (defensins).
3. Toxicological analysis of compounds and extracts with antineoplastic and antimicrobial activities in vitro and in vivo.
4. Modeling of malignant cell proliferation and metabolic activity.

The more significant scientific and scientifically applied contributions in these areas are set out in detail in the attached "Information on scientific contributions in the field and guidelines for development" of the candidate. A significant contribution of the candidate is that a collection of normal and malignant cell lines has been created. Chief Assistant Maya Zaharieva has introduced routine protocols for cell storage, cultivation and measurement of biochemical parameters in cell cultures. She has also introduced the principles of the so-called 3R, also named "Replacement, Reduction and Refinement" in the vivo experiments with laboratory animals. She has applied these principles in several successive research projects that required work with experimental animals. In addition to the research activity developed by Ch. Assistant Maya Zaharieva, she also has purely practical contributions related to the expansion of the infrastructure of the Department of Infectious Microbiology as well as the introduction of new scientific directions. She has made a huge contribution to the creation and development of the „Cytotoxicity and Signal Transduction” laboratory for the needs of the Department of "Infectious Microbiology" through a grant for equipment from the Alexander von Humboldt Foundation (2014).

## **PARTICIPATION IN RESEARCH PROJECTS**

In the last 5 years Maya Zaharieva has been a participant in 20 projects and National Programs, in 4 of which she is a leader and in 1 of which is a co-leader.

## **EDUCATIONAL AND TEACHING ACTIVITY**

From the presented reference for the educational and teaching activity of the candidate it can be seen that during the period from 2011-2012, 315 teaching hours of exercises were conducted in the discipline "Pharmacology" at the Medical Faculty of Sofia University "Kliment Ohridski".

Ch. Assistant Maya Zaharieva is a co-author in two chapters of the guide to pharmacotherapy with Ch. editor Assoc. Prof. Dr. S. Konstantinov, MD Ed. Softtrade, 2011. The activity of the candidate as a co-leader of three graduates also deserves a positive assessment.

## CONCLUSION

Ch. Assistant Maya Zaharieva, Ph.D. is a lecturer and scientist in the field of pharmacology and microbiology. Her research papers have been published in renowned scientific journals. Most of them concern unexplored problems and contain significant scientific and applied scientific contributions and have been cited over 235 times by Bulgarian and foreign scientists. Taking into account her scientometric indicators, contributions, participation in research projects and commitment to educational and teaching activity, I can confidently say that they fully meet the criteria of LDASRB, the Regulations for its implementation and the Regulations of the Institute of Microbiology at BAS for holding the academic position of "Associate Professor". Based on all of this, I recommend to the respected members of the scientific jury to support the candidacy and to propose to the Scientific Council of BAS Ch. Assistant Maya Zaharieva, Ph.D. to be elected to the academic position "ASSOCIATE PROFESSOR" in the scientific specialty "MICROBIOLOGY" for the needs of the Department of Infectious Microbiology, Laboratory of Cytotoxicity and Signal Transduction.

18-Aug-2020

Assoc. Prof. Victoria Stefanova Levterova,PhD