

REVIEW

from: Prof. dr. Anna Naydenova Tolekova, dm

director of Medical college, Trakia university

subject: competition for "Assoc.professor"

field of higher education: 4. Natural sciences, mathematics and informatics

professional direction: 4.3. Biological sciences

scientific specialty: "cell biology",

Information about the contest

The competition was announced for the needs of "Prof. Dr Asen Zlatarov" university in
sg no. 45/17. 06.2022

Brief information about the candidates in the competition

In the competition for 'assoc. professor', documents were submitted by the only candidate ch. assistant ph.d. Veselina Stoyanova Merhar.

1. General presentation of the received materials

The set of materials presented by the candidate in paper and electronic media is in accordance with the Law on the Development of the Academic Staff in the Republic of Belarus, the Regulations for the Implementation of the Law and the Regulations of "Prof. Dr Asen Zlatarov" University - Burgas.

2. Brief biographical data of the candidate

Veselina Merher graduated in 1986 with a Master's degree at Kliment Ohridski University, Faculty of Biology, majoring in "Molecular and Functional Biology". Conducts specialization in "Animal and Human Physiology". For three years he worked as a specialist biologist at the Institute of Physiology of the BAS. He defended his doctoral thesis on the topic "Soluble proteins in wheat germ in relation to seed viability" at the Institute of Plant Physiology, Russian Academy of Sciences in 1993 and received the ONS "Doctor". She was promoted as Research Associate II degree and continues her work at the Institute of Physiology. Since 1994, he has continued his professional journey in the Republic of South Africa. He has successively worked as a postdoctoral fellow at the University of Bloemfontein, an assistant and research fellow at the University of Kwazulu-Natal, a specialist in microscopic techniques at SMM Instruments, a consultant in microscopic and histological techniques in private practice in Durban and a facilitator, senior researcher and academic advisor at the College of Medicine in University of Kwazulu-Natal. The prestigious and diverse positions that she holds clearly suggest her formation as a competent and multiprofessional specialist. In February 2019, he started working as a lecturer in the discipline "Pharmaceutical Botany" at the University "Prof. Dr. Asen Zlatarov" and since March 2020 he is the main assistant in the Department of "Biology, Medical Genetics, Microbiology" at the same university.

3. General characteristics of the applicant's activity

Educational activity

Veselina Merher's stay in foreign universities is related to both scientific research and teaching activities. She developed and delivered curriculum material for the Functional Cellular Architecture (BIOD341) educational module - Faculty of Science, University of KwaZulu-Natal, Durban, Republic of South Africa, Microscopy Theory and Practice Lecture Course and Lecture Course in histology and immunohistochemistry. Her weekly workload was 17 study hours of lectures, 9 study hours of practical classes and 20 hours of work with doctoral students.

After her return to Bulgaria in the Ministry of Finance of the University "Prof. Dr. Asen Zlatarov" gives lectures - 30 hours and practical classes - 90 hours for the specialty of medicine in the study discipline "Cytology, General Histology and Human Embryology", 120 classroom hours of exercises in the discipline "Anatomy and Histology" and 120 study

hours of seminars in the subject "Biology". In addition, he also teaches medical assistant students the subject "Biology" - lectures - 24 study hours and exercises - 9 study hours. The high qualification of Veselin Merhar as a teacher is also confirmed by the fact that she successfully completed the course for acquiring the additional professional qualification "Teacher of Biology" at the University "Prof. Dr. Asen Zlatarov".

These data give me reason to rate highly the teaching experience and potential of candidate Veselina Merhar.

Research activity

Most of Veselina Merhar's research activity is devoted to the subject related to certain characteristics of seeds of various plant species. In two of the publications, analyzed sequentially the isolation of soluble proteins from wheat germs of different viability and their electrophoretic spectrum depending on viability. Her analyzes testify to the reduced solubility of albumins in the aging process and the lack of change in globulins, as well as the physiological importance of some proteins in seed germination. In 4 of the publications printed in prestigious journals, the author examines the role of the resistance gene Lr35 in the synthesis of enzymes chitinase, peroxidase and b-1,3 gluconase, which determine the resistance of wheat to toxic agents and leaf rust. In her study, devoted to the biochemical and histopathological response of wet-stored seeds, which are resistant to drying and freezing during ex-situ storage, the author describes for the first time the expression of their protective mechanisms.

Also of interest are the candidate's earliest publications, conducted together with a team of pharmacologists on animal models with rats. They are related to tested different nootropic agents on memory abilities in rats, as well as the presence of the main monoamines in the cerebral cortex of rats undergoing active and passive avoidance training.

In her latest publication, the candidate analyzed the expression of the LYVE-1 receptor in the placenta of HIV-infected normotensive and preeclamptic pregnant women.

For the competition, the candidate has submitted 12 publications, of which 10 are full-text in English and 2 abstracts in a collection of abstracts with an impact factor. Seven of the publications have an impact factor.

The number of citations provided to the articles significantly exceeds that required to form the required points. 60 citations were deposited in the materials, 56 of which were

published in journals with an impact factor or SJR. This is proof of the recognition of Veselin Merhar among the scientific community and the interest in her scientific activity.

The candidate is the author of the monograph "Immunofluorescence methods for visualization and analysis of the cyto- and nucleoskeleton of the cell". At the beginning of the monograph, Veselin Merhar argued the need for the publication of such a monograph, focusing on the diseases associated with nucleo- and cytoskeleton abnormalities and the emerging problems in their visualization. It also describes existing electron microscopic, immunofluorescence methods and makes a comparison between conventional fluorescence microscopy and confocal laser scanning. The procedures for carrying out the research are successively examined in detail. The information that the author shares in the "Results" chapter is extremely valuable, as she comments on the problems encountered and ways to solve them. The methods and procedures presented and analyzed by the author are a contribution to the existing ones and enrich the arsenal for studying the cyto- and nucleoskeleton of cells. In the context of what has been said so far, I would like to emphasize the importance of Veselin Merhar's monographic work for specialists in this field.

In the competition materials, the candidate also presents two chapters of monographs, in which she participated as a co-author, respectively Immunocytochemical Localization of β -1,3-Glucanase in Wet-stored Recalcitrant Seeds of *Avicennia marina* Infected by *Fusarium moniliforme* in Biology, Development and Ecology and Comparative Morphometric Image Analysis of LYVE-1 and Podoplanin in HIV infected preeclamptic women in Contemporary Methods in Bioinformatics and Biomedicine and Their Applications.

The candidate is a participant in 18 international scientific forums and 4 national ones. As a student leader, he participated in the student scientific session organized by the University "Prof. Dr. Asen Zlatarov" with three joint developments.

Veselina Merhar's scientific activity is also related to the development of her project activity. She has submitted evidence for participation in 5 international scientific projects, one of which she was the principal investigator and one of which she was the supervisor and principal investigator.

Scientific metrics for "Assoc.prof"

From the data presented to me about the scientific activity of Veselin Merhar, it is clear that her overall scientific production exceeds the required points in some of the indicators and as a whole sum.

All the above facts give me reason to give a high assessment of the overall scientific asset of the candidate. Vesselina Merher is a prominent scientist and university lecturer in the field of biological sciences.

Conclusion

The candidate in the competition has presented a sufficient number of scientific papers. In the candidate's scientific work, there are a number of contributions of a scientific-applied and scientific-theoretical nature.

On the basis of the above, I express my convinced opinion that Veselina Merher meets all the requirements of ZRASRB and the Regulations for the Development of the Academic Staff of "Asen Zlatarov" University - Burgas.

I propose to the respected members of the Scientific Jury to award the academic position of "ASSOC. PROFESSOR" to Veselina Merher, in the scientific specialty "Cell Biology", professional direction 4.3. Biological sciences, field 4. Natural sciences, mathematics and informatics.

17. 11.2022 г.
Стара Загора

Проф. Д-р А. Толева, дм