

STATEMENT

from Prof. Valeria Ignatova Kaleva, MD, PhD

Professor at the Department of Pediatrics,
Medical University "Prof. Dr. Paraskev Stoyanov", Varna

Subject: Dissertation of Denis Sunay Niyazi, MD PhD student in full-time training at the Department of Microbiology and Virology, University of Varna, for acquisition of scientific and educational degree "Doctor" in the field of higher education 4. Natural sciences, Mathematics and Informatics, professional field 4.3. Biological sciences, scientific specialty "Microbiology".

On the basis of Order No P-109-276/04.07.2022 of the Rector of the University of Varna and by decision of the Scientific jury (Protocol No 1/06.07.2022) I am appointed to prepare a statement on the dissertation "**Investigation of bacteremia and invasive fungal infections in patients following autologous and allogeneic hematopoietic stem cell transplantation**" for the acquisition of a scientific and educational degree "Doctor" in professional field 4.3. Biological sciences, scientific specialty "Microbiology".

The statement was prepared according to the requirements of the Law on Development of Academic Staff in the Republic of Bulgaria and its Regulations for its application at the Medical University of Varna.

Brief biographical and professional information of the PhD candidate

Denis Sunay Niyazi, MD is a graduate of SMHS "Acad. Nikola Obreshkov" in Razgrad. His training in medicine is completed at the Medical University "Prof. Dr. Paraskev Stoyanov", Varna in 2018. Since 2019 he has been working as an assistant professor in the Department of Microbiology and Virology at the Faculty of Medicine of the Medical University "Prof. Dr. Paraskev Stoyanov", Varna and as a resident - physician at UMHAT "St. Marina", Varna. That same year he enrolled in a PhD program on the subject of the current dissertation with scientific leaders Prof. Temenuga Stoeva, MD, PhD and Assoc. Prof. Iliana Micheva, MD, PhD.

1. Assessment of the relevance of the PhD topic

The current work is the first in Bulgaria to study and draw reasoned conclusions about the clinico-microbiological characteristic of bacterial and invasive fungal infections in patients after autologous and allogeneic hematopoietic stem cell transplantation (HSCT).

2. Characteristics, volume and structure of the dissertation

The dissertation was written in 186 pages and is illustrated with 20 tables and 18 figures. The style is good, clear and with a correct discussion of the data and results.

The content is appropriately structured and balanced. It is presented by an introduction (one page), a literature review (47 pages), aim and tasks (one page), material and methods (19 pages), results and discussion (69 pages), conclusions (two pages), contributions (two pages), a list of publications related to the dissertation (two pages) and a reference list (39 pages).

2.1. Literature review

The literature review defines the clinical significance of infectious complications in patients after HSCT and presents in detail the modern data related to the risk factors for their development, the etiological spectrum and the algorithms for prevention and treatment. Literary data have been interpreted in depth and the need to accumulate additional information through clinical trials in new transplant centers has been established.

2.2. Aim and tasks

The aim of the dissertation is formulated clearly and precisely. To achieve it, the PhD student has defined 7 main tasks that follow the aim logically.

2.3. Materials and methods

The dissertation is a prospective clinico-microbiological and epidemiological study on 74 patients who have undergone HSCT. In 26 of them, bloodstream and/or invasive mycotic infections have been documented, which are subject to the intended aim and tasks. The design and methodology for research have been selected appropriately and the work has been carried out according to the rules of good scientific practice with permission from the Committee on Ethics of Research at MU-Varna. The steps of the studies are explained in detail, and the PhD student has worked out the analyses himself or under the directions.

2.4. Results and discussion

The results of the survey are structured in 7 sections, two of which contain two subsections. All are illustrated very well with a total of 15 tables and 18 figures. The assigned sequence of the tasks has been respected and the design of the scientific direction has been followed.

At the end of each subsection/section, the PhD student sets out the assessment of his scientific results and compares them with the knowledge in the current literature. The discussions are made in a clear and understandable literary language, which shows both his excellent preparation on the topics discussed and the clinical and analytical depth required for every young scientist.

2.5. Conclusions and contributions

Eleven conclusions have been formulated consistently, clearly and reviewably in accordance with the aim and chosen tasks. All of them are original for the national scientific area, since the studies available so far do not cover similar groups of patients.

On the basis of the conclusions, 17 contributions are formulated.

2.6. Publications on the topic

The list of scientific publications includes 3 articles published between 2020 and 2022. In addition, 4 announcements at scientific forums and participation in a project are cited. The scientific activity during the period of preparation of the dissertation is consistent with the normative requirements.

2.7. Reference list

The reference list contains 430 titles, of which 8 in Cyrillic. The dissertation shows skillful handling of published sources and correct citation. A total of 227 (52.8 %) of the cited articles have been published in the last 10 years, making the literature reference extremely contemporary. No significant repetitions were detected in the citations.

3. Assessment of the results

The results are in-depth, scientifically sound, fully applicable in practice and available for use in future research. The competent assessment of the PhD candidate and his own opinion on the results are visible.

4. Assessment of the contributions

I fully accept the cited contributions of an original, affirmative and scientifically applied nature. They have a certain scientific and practical importance, especially for Bulgarian science and practice, and support the importance of the dissertation.

5. Critical notes

There are no grounds for essential critical remarks.

6. Summary

The summary is 83 pages long. It fully meets the requirements of the Academic Staff Development and reflects objectively and adequately the main results and scientific contributions of the dissertation.

I can't find any gaps in the documentation attached by Denis Niyazi, MD

CONCLUSION

Denis Niyazi's dissertation is a well-planned, well-performed and clinically significant comprehensive study of bacterial and fungal infections in patients with auto- and allo-HSCT. In his scientific development, the PhD student demonstrates in-depth theoretical knowledge, professional training and qualities for conducting scientific research independently. His scientific work is a reflection of the modern way of working in a multidisciplinary team, and the conclusions and contributions made – a basis for building on the success in diagnostic-therapeutic and prophylactic aspects.

In light of the above, I give my positive assessment of the dissertation "Investigation of bacteremia and invasive fungal infections in patients following autologous and allogeneic hematopoietic stem cell transplantation" and propose to the members of the esteemed Scientific jury to award Denis Sunay Niyazi, MD the educational and scientific degree "Doctor" in the scientific specialty "Microbiology".

22.07.2022

Varna



Prof. Valeria Kaleva, MD, PhD