To the Chairman of the Scientific Jury,

Appointed by order P2015/13.07.2023

of the Rector of the MU - Sofia

REVIEW

from

Prof. Dr. Penka Ilieva Perenovska, dm

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About:

Competition for the academic position "Associated Professor" - for teaching Bulgarian and English language students, part-time, in the medical specialty "Pediatrics" for the needs of the Department of Pediatrics, Faculty of Medicine, Medical University - Plovdiv, announced in State Gazette, issue N32 of 8.4.2023

The review was prepared in compliance with Order no. P2015/13.07.2023 of the Rector of the MU Plovdiv and according to the decision of the meeting of the Scientific Jury of 24.07.2023.

The candidate, Ch. Assistant Professor HASAN ALIEV BURNUSUZOV, PhD, presented all the mandatory documents for the competition - 34 documents according to the list.

Biographical data and presentation of the candidate

01.10.2007 - until 30. 05. 2008

• AGPPMP "Cytomedika" - city of Plovdiv, resident doctor, Coordinator

01. 10. 2008 – 01.05.2010

• "Vela" Medical Center Resident - Doctor in an outpatient clinic; mobile team - 24-hour children's polyclinic

01. 07. 2010 - until now UMBAL "St. Georgi" Plovdiv,

Clinic of Pediatrics, Oncohematological Unit

Laboratory of Clinical Immunology

21.04.2015 - SO FAR

MEDICAL UNIVERSITY OF PLOVDIV - FACULTY OF MEDICINE

Department of Pediatrics and Medical Genetics

Department of Medical Microbiology and Immunology

Research Institute of MU

CHIEF ADM. ASSISTANT

EDUCATION AND TRAINING

15.09.2001 – 1 9. 10. 2007

Medical University - Plovdiv, Master's degree – medical doctor

01.04. 2009 – 11.2013 Medical University - Plovdiv, Department of Pediatrics and Medical Genetics, PhD – Doctorate in Medicine; diploma No. 062-DM/25.11.2013

05.10.2017 - 31.08.2021

Medical University - Plovdiv, Department of Microbiology and Immunology,

Acquired Specialty in "Clinical Immunology" - 14.12.2022

01.06.2010 – 30. 08. 2014

Medical University - Plovdiv, Department of Pediatrics and Medical Genetics – Acquired Specialty in "Pediatrics" - 02.12.2014

Dr. BURNUSUZOV KNOWS TURKISH, ENGLISH AND GERMAN.

Works well in a team, has contacts with colleagues from other similar structures at home and abroad, /incl. The international scientific network for the study and flow cytometric determination of MRD in children with acute leukemia/ Participates in qualification courses in our country and abroad (Austria and Italy).

The candidate works competently with specific equipment - flow cytometer, other specialized laboratory equipment, mannequins-simulators and dummies and specialized software. Participates in the management, preparation and implementation of scientific projects, in the processing and presentation of their results at national and international scientific forums.

Actively participates in the educational and teaching activities of the Department.

Membership in professional and scientific organizations: BMA, BPA, Bulgarian medical society of pediatric oncohematology, Bulgarian Association of Clinical Immunology, European Society of Pediatric Oncology, I-BFM ALL FLOW MRD SG network.

Research activity

In the current competition, Dr. Burnusuzov participated with: a dissertation for the acquisition of the PhD "Doctorate in Medicine- FLOW CYTOMETRICAL MONITORING OF MINIMAL RESIDUAL DISEASE IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA", a habilitation thesis and 32 scientific papers, as follows: 14 have been published in referenced and indexed in world-famous databases with scientific information (Scopus and Web of science; scientific publications, 4- with impact factor); 6 of them were cited in IF- journals, 1 in a non-referenced peer-reviewed journal, and 1 in a monograph. Publications in non-referenced peer-reviewed journals or in edited collective volumes – 18 . Dr. Burnusuzov is the first author in 14 (43.75%) of the scientific works, 8 of them were published in referenced and indexed journals in Scopus and Web of Science. Second author in 8 of the scientific works / 2 of them indexed in Scopus/. Dr. Burnusuzov's scientific developments are in various areas of pediatrics, primarily in the field of pediatric oncohematology and clinical immunology. Many of the candidate's publications are the result of work in author collectives. He participated in the writing of chapters in 1 study guide and in the translation of an illustrated textbook of Pediatrics. Dr. Burnusuzov has participated with scientific reports in 4 international congresses and conferences, 3 reports with abstracts have been published. He participated in congresses and conferences on various topics in Bulgaria. The candidate's publications in our country are in specialized scientific journals: Pediatrics, Practical Pediatrics, General Medicine, Folia Medica, IMAB, Bul Jour Clin Immunology, Collection of materials "Emergency Pediatrics", Pediatrics plus; abroad: Pediatr Hematol Oncol., Cancers, Front Oncol., Pediatr Blood Cancer, Arch Sur Clin Case Reports, internet, etc.

Participation in projects

Dr. Burnusuzov has participated in a total of 10 scientific projects:

In three of these, multidisciplinary teams are investigating childhood acute leukemias: two are investigating blast cell resistance to glucocorticoids and the effects of mitochondrial inhibitors in resistant lymphoblastic leukemia; in one, an algorithm was created to track MRD in children with ALL. The latter is related to the author's dissertation. These projects resulted in three more publications.

Documents certifying participation in national scientific projects of Dr. Burnusuzov:

Reference from MU- Plovdiv for participation in national projects: Two national projects: "Personalized and innovative medicine - PERIMED", the implementation of which continues.

Certificate from the Scientific Department for intra-university projects - 4 intra-university projects, one of which Dr. Burnusuzov is the head of, are related to scientific developments of PhD- students with whom he works closely. The topic of the projects is again related to the study of children's ALL.

Copy of Contract for VUP and cooperation with MU-Sofia: Joint project with colleagues from MU-Sofia, regarding the clinical, immunological and genotypic aspects of chronic immune thrombocytopenia in the set of primary immune deficiencies.

In the self-assessment table for MANDATORY MINIMUM SCIENTOMETRIC INDICATORS OF MU-PLOVDIV FOR THE FIELD 7.1. MEDICINE (medico-clinical) and 7.5. HEALTH CARE, Dr. Burnusuzov has

collected a total of **2924.13 pt**, which meets and exceeds the mandatory quantitative scientometric criteria for occupying the academic position "Associated Professor" at MU-Plovdiv.

Citations of the candidate's publications

Dr. Burnusuzov presents a reference from NACID for citations: in scientific journals, referenced and indexed in world-famous databases with scientific information (Scopus and Web of science) or in monographs and collective volumes: 6 publications with a total of 24 citations, **total IF of citations - 151.031 and h-index- 3**, citations in monographs and peer-reviewed collective volumes – 1 article cited twice and citations or reviews in non-referenced peer-reviewed journals: 1 article. Dr. Burnusuzov is a section editor of the journal Folia Medica and a member of the editorial board of the journal of Pediatrics. He has reviewed 5 articles for the journal Folia Medica.

Evaluation of the candidate's monograph "PRIMARY IMMUNE DEFECTS WITH PREDOMINANT ANTIBODY DEFICIENCY, Humoral Immune Deficiencies" with reviewers Prof. Dr. Mariana Murdjeva, MD, and Prof. Dr. Miroslava Bosheva, MD. The monograph is dedicated to the most common group of primary immune deficiencies - humoral, which are still a challenge for immunologists and pediatricians. The book covers two parts. The first is an overview of antibody deficient PIDs. The author presents the historical data, epidemiology, etiology, pathogenesis and classification of congenital immune disorders, their clinical picture, the association with autoimmune manifestations, infections and tumors, the challenges related to their diagnosis, therapy and prevention. Attention is given to genetic defects and signaling pathways for the development of immune deficiencies. In the special, second part of the monograph, the author, based on his experience as a pediatrician and clinical immunologist, examines specific nosological units in detail. Dr. Burnusuzov devotes an entire chapter of his monograph to issues related to vaccinations of patients with humoral immune deficiencies. The text is illustrated with tables and figures, and the literature reference is rich - it includes 750 sources. The monograph is written in a good style, academic and understandable. At the end of his presentation, the author shares his opinion: "that no primary immune deficiency would be correctly and timely diagnosed and treated if we doctors were not aware of the existence of these diseases".

Scientific contributions of the CANDIDATE

Contributions of an original nature:

1. For the first time in our country, the 8-color MP FCM methodology for monitoring MRD in children with ALL has been standardized and approved.

2. The criteria determining the quality of the results of the 8-color MP FCM methodology have been specified, which contributes to equating the reliability of the laboratory's results with those of international standardized laboratories.

3. The first systematic prospective study of MRD in children with acute lymphoblastic leukemia (ALL) was conducted in our country, using modern, highly sensitive 8-color multiparameter flow cytometry

4. Prerequisites have been created for the routine determination of MRD in children with ALL by MP FCM, as a condition for the introduction of modern, risk-adapted therapeutic protocols. Thanks to this, the center is becoming a reference national center for MRD research in these patients.

5. For the first time in our country, the use of anti-GD2 immunotherapy in metastatic, GD2-positive Ewing's sarcoma was described by the team of the pediatric oncohematology section at the clinic, with the participation of Dr. Burnusuzov.

Scientific and applied contributions:

1. The correlation between persistent MRD, determined by MP FCM, and other prognostic markers reported during induction treatment was analyzed.

2. A 14-color methodology for the study of MRD in DALL was developed and is being implemented. This significantly improves the quality of the research.

3. The clinical significance of anti-L-asparaginase antibodies in terms of relapse-free survival of children with ALL was analyzed, this allows implementation in the practice of their routine examination.

4. The study of the role of anti-neuronal antibodies in patients with paraneoplastic syndrome was started

5. Algorithms and recommendations for behavior in children with thrombocytopenia, acute hemolysis and CPR in children needing it have been developed and published.

6. An important direction in the scientific activity of Dr. Burnusuzov is the study of PID, with special attention being paid to the screening of infants or "signal" pneumocystis pneumonia, as well as the diagnosis and treatment of disorders in the oxidative burst or innate immunity.

Contributions of a scientific and confirmatory nature:

1. In a comprehensive literature review, the role of targeted therapy and immunotherapy in the treatment of malignant and rheumatological diseases in children is outlined.

2. The new immunological aspects in the etiopathogenesis, diagnosis and therapy of some rare but significant diseases (Crohn's disease, immune thrombocytopenia, Langerhans histiocytosis) are examined in detail.

3. The nature and necessity of palliative care for children with oncohematological diseases, as well as the moral and ethical problems in these cases, were studied.

4. The modern recommendations for vaccination of children on immunosuppressive therapy under our conditions have been specified and confirmed.

Contributions of a theoretical nature:

Cell metabolism studies demonstrating the role of Atovaquone on cALL cells in vitro showed a significant reduction in basal respiration and ATP levels, reduced proliferation, cell cycle arrest and induction of apoptosis. This may be the basis for further drug trials, incl. and clinical trials.

Teaching activity

Attached is a reference from the Academic Department of MU-Plovdiv regarding the academic workload of Dr. Burnusuzov. For the periods: 2019/20, 2020/21 and 2021/22 fully covers the

required norms for a teacher. Dr. Burnusuzov actively participates in training with practical exercises, seminars and selected lectures, examinations of medical students, lectures on pediatrics to English-speaking students of dental medicine, seminars and practicals with trainee doctors and interns. He is a teacher at the Medical Simulation Training Center of the Medical University of Plovdiv. Conducted training for all doctors of the pediatric clinic on behavior in emergency situations under the title "The first 6 hours". A document was presented certifying that Dr. Burnusuzov is the supervizer of Dr. Ivelina Yaneva's specialization in pediatrics.

I recommend the candidate to increase the number of publications. Dr. Burnusuzov has enough material for this.

Conclusion

After summarizing the above data, I believe that Dr. Hasan Burnusuzov is an established teacher and highly qualified specialist in the field of pediatrics, oncohematology and immunology. His publications cover various areas in pediatrics. The candidate possesses in-depth theoretical, clinical and professional skills.

On the basis of the above, in accordance with the Law for the Academic development in Bulgaria and the Regulations for occupying academic positions in the MU- Plovdiv, I give a positive assessment and recommend the members of the Scientific Jury to vote for promoting Dr. Hasan Aliev Burnusuzov, dm, to the academic position of "Associated Professor".

Prepared the review:

Prof. Dr. Penka Iliev Perenovska, d.m