

OPINION

by Prof. Elina Georgieva Baltadzhieva-Trendafilova, MD, PhD, Head of the Intensive Cardiac Care Unit (ICCU) at the Cardiology Clinic of the National Cardiology Hospital, Sofia.

SUBJECT: Competition for the academic position of Associate Professor in the field of higher education 7. "Health and Sports", professional field 7.1 "Medicine", in the scientific specialty "Pediatric Cardiology", for the needs of the Clinic of Pediatric Cardiology at the National Cardiology Hospital EAD (NCH), Sofia with the single candidate Dr. Zornitsa Nikolova Vasileva, MD.

The opinion was prepared on the basis of Order No. 447/ 30.10.2024 in accordance with a decision of the Scientific Council (protocol No. 18 of 08.10.2024) on the announcement of a scientific jury for the conduct of this competition (announcement in State newspaper No. 91/29.10.2024). The opinion was prepared in accordance with the requirements of the Law and the Regulations for the Development of the Academic Staff in the Republic of Bulgaria, as well as the Regulations of the Scientific Council of NCH. I have no conflict of interest in this competition, I did not find any gaps in the competition documentation.

BRIEF BIOGRAPHICAL DATA: Dr. Vasileva graduated from the Faculty of Medicine of the Medical University of Sofia in 2005 with excellent results. She obtained a specialty in Pediatrics in 2011, and in 2017 - in Pediatric Cardiology, holds a European certificate "Echocardiography in Congenital Heart Disease" and "Advanced fetal echocardiography" from the University of Barcelona, Spain, "Echocardiography in Childhood" and "Fetal Echocardiography" from the Medical University of Sofia. She has specializations in Belgium and Spain. In 2023, she defended her doctoral thesis on the topic "Preoperative Echocardiographic Diagnosis of Complete Atrioventricular Septal Defect" and obtained the ONS "Doctor" in the specialty "Pediatric Cardiology". Since September 2023, she has been a Chief Assistant at the Clinic of Pediatric Cardiology.

Dr. Vasileva is a respected and erudite pediatric cardiologist, with a strong interest in echocardiography, and with clinical, organizational, and teaching experience.

SCIENTIFIC ACTIVITY: Dr. Vasileva participates in this competition with a total of 99 scientific papers, distributed as follows: 1 dissertation and an autoreferat, 1 independent monograph, 3 publications related to the dissertation, 22 articles in scientific journals referenced in Web of Science and Scopus (8 of them with IF), 22 publications in journals referenced in the national reference list, 44 publications in non-refereed publications, 7 published abstracts from scientific congresses. In 85 of the scientific papers, Dr. Vasileva is the first author. Dr. Vasileva has participated as a co-investigator in two international clinical trials. The scientific papers have been cited 24 times: 8 citations in Bulgarian journals, in Scopus – 3 citations, in Web of Science (Clavirate) – 9 citations, in other foreign freely accessible online sources – 4 citations. Impact factor is not indicated.

Dr. Vasileva's scientific publications cover the Minimum National Requirements of the Ministry of Education and Science and the NCH according to Supplement No. 1 of the Regulations for the Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria and the National Cardiology Hospital - total score: 1076.89 points. The scientometric data are presented clearly and accurately in the materials submitted for review.

Dr. Vasileva's scientific interests are mainly in the field of:

- *Congenital heart malformations* - echocardiographic evaluation of patients with atrioventricular septal defect; anatomical characteristics and hemodynamics of congenital heart malformations (CHM); diagnostic approach in children with CHM; CHM in adults;
- *Fetal cardiology* - recommendations for fetal echocardiography; prenatal identification of critical CHM;
- *Cardiac involvement in the framework of COVID-19 in children* - multisystem inflammatory syndrome in children; clinical presentation, laboratory abnormalities, electrocardiogram changes, echocardiographic findings and myocardial changes on MRI;
- *Infective endocarditis* - demographic characteristics of children with CHM and infective endocarditis; factors determining the outcome of surgical treatment;
- *Pediatric cardiac surgery and intensive care in CHM* - echocardiographic evaluation before and after cardiac surgical interventions; follow-up of children after cardiac surgery;
- *Rare clinical cases* - recommendations for the treatment of thrombosis in children and the use of DOAC in childhood; rhythm and conduction disorders; antihypertensive therapy; heart failure;
- *General pediatrics* - Kawasaki disease; metabolic diseases in childhood; cardiovascular risk in diabetes; new antidiabetic medications;

CONTRIBUTIONS: In my opinion the main contributions of the candidate are in the field of atrioventricular septal defect, as the embryology, genetics, anatomical features and clinical manifestations of this CHM, the criteria for prenatal diagnosis, the preoperative and postoperative echocardiographic evaluation, the evolutionary complications, the cases with late diagnosis of the malformation have been systematically studied, based on an extensive literature review and author's experience. The therapeutic approach in patients with AVSD is presented, including drug treatment of heart failure, various types of palliative and corrective surgeries. An original contribution is the testing of a new method for assessing left ventricular function, based on 1P color tissue Doppler-Echocardiography through the aortic valve. A scoring system based on four echocardiographic measurements has been developed to distinguish balanced from unbalanced forms of atrioventricular septal defect, which has been validated and is already applied in the National Cardiology Hospital.

The candidate's developments in the field of pediatric echocardiography and fetal echography, as well as in pediatrics and clinical pediatric cardiology, are also a significant scientific and applied contribution. The rare clinical cases in Dr. Vasileva's publications enrich the theory and practice of pediatric cardiology.

TEACHING AND EXPERT ACTIVITIES: Dr. Vasileva is actively involved in the education of medical students (Bulgarian and English-speaking), residents in pediatrics and pediatric cardiology, she is a lecturer in an ultrasound training course for neonatologists, as well as for residents in cardiology. She is the scientific supervisor of two residents in pediatric cardiology. For the last 5 years, she has an average of 250 teaching hours/year. She presents 20 reports from lectures at national and international forums.

She is a member of the Bulgarian Pediatric Association, Bulgarian Society of Cardiology, European Association of Cardiovascular Imaging, European Society of Cardiology, Orde der Geneesheren – Flemish Medical Union, Belgium; European Association of Pediatric Cardiology, Fetal Heart Society. She is a consultant to the "Bulgarian Christmas" and a reviewer for the journals

Hippokratia and BMC Pediatrics. He received an award from the Bulgarian Society of Cardiology "The Best of the Bulgarian Cardiology Journal" for the publication "Echocardiographic Parameters for Differentiating Balanced from Unbalanced Forms of Complete Atrioventricular Septal Defect".

IN CONCLUSION: The above describes Dr. Zornitsa Vasileva as an established and recognized specialist in the field of pediatric cardiology and pediatric echocardiography. I believe that the overall scientific, practical, organizational and teaching activities of Dr. Zornitsa Nikolova Vasileva, MD fully meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, as well as the Regulations of the National Cardiology Hospital.

I will vote positively, I recommend to the Honorable Members of the Scientific Jury to vote for the award of the academic position of "Associate Professor" to Dr. Zornitsa Nikolova Vasileva, MD in the field of higher education 7. "Healthcare and Sports", professional field 7.1 "Medicine", in the scientific specialty "Pediatric Cardiology" for the needs of the Clinic of Pediatric Cardiology at the National Cardiology Hospital, Sofia.

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Sofia


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