

**EXPERT OPINION**  
**Prof. Dr. Penka Perenovska**

Member of the Scientific Jury, appointed by Order № RD-26-2481/13.10.2021 of the Executive Director of UMHATEM "N.I. Pirogov"

Subject: Competition for the academic position of "professor" in the field of higher education 7. Healthcare and sports in Professional field 7.1 Medicine and scientific specialty "Pediatric Surgery", announced in State Gazette, issue 61 of 23.07.2021

The only candidate who submitted documents and was admitted to participate in the competition is Assoc. Prof. Dr. Hristo Ivanov Shivachev. The documents submitted by Assoc. Prof. Hristo Shivachev meet the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff.

**Biographical data and professional development of the candidate**

Assoc. Prof. Hristo Shivachev, MD is born on 08.Sep.1969

**1995** - graduated in medicine in Medical University Sofia. Started work in 26<sup>th</sup> medical center-Sofia as a therapist.

**From 1997** - appointed as an intern at the Department of Pediatric Thoracic Surgery, Second Pediatric Surgical Clinic, Department of Pediatric Surgery, "N.I. Pirogov", where he still works

**2011** - defended the scientific degree "Doctor" in Pediatric Surgery

**2012** - acquired the academic position "Associate Professor"

**From 2014 to 2017** - Head of the Department of Pediatric Thoracic Surgery

**From 2017 until now** - Head of the Pediatric Surgery Clinic

**Professional qualifications:** In 2004 he acquired a specialty in "Surgery", in 2012 - a specialty in "Pediatric Surgery", in 2021 - a specialty in "Thoracic Surgery" Additional qualifications: Video-thoracoscopic surgery, Laparoscopic surgery, Bronchology 1st and 2nd level, Conventional gastrointestinal endoscopy 1st level. Specializations were held in Vienna, Naples, Genoa

**Academic and scientific activity:**

The scientometric indicators of Assoc. Prof. Dr. Hristo Shivachev are in accordance with the requirements adopted by the Scientific Council of UMHATEM "N.I. Pirogov" EAD - Sofia and reflected in (Appendix 1) of the Regulations for the development of the academic staff.

**Evaluation of the research activity:**

**One monograph and 50 publications** are presented, which are distributed as follows:

- 20 articles in journals, referenced in world databases Scopus and Web of Science;
- 30 articles published in journals referred to in the National Reference List;
- 86 reports in scientific forums; Assoc. Prof. Shivachev has several awards (including one first place) from National conference for general practitioners and pediatricians

The articles submitted for review are in Bulgarian and foreign magazines, 23 of them are in English. Of the scientific communications at Bulgarian and foreign forums, 9 are in English.

Distribution by author's place:

Publications			Scientific reports		Total	
	Number	%	Number	%	Number	%
<i>Independent</i>			<b>6</b>	6.9%	<b>6</b>	4.4%
<i>First author</i>	<b>9</b>	18%	<b>22</b>	25.6%	<b>30</b>	23%
<i>Second author</i>	<b>19</b>	38%	<b>28</b>	32.6%	<b>47</b>	34.5%
<i>Third and subsequent author</i>	<b>22</b>	44%	<b>30</b>	34.9%	<b>52</b>	38.1%
<b>Total</b>	<b>50</b>	<b>100</b>	<b>86</b>	<b>100</b>	<b>136</b>	<b>100</b>

Assoc. Prof. Hristo Shivachev is a co-author in one textbook and in one guide.

The applicant submitted an official reference to the cited:

15 citations in referenced foreign publications and 30 citations in Bulgarian sources, referenced in the National Reference List.

The total impact factor of the candidate is **33.3**.

The presented publications have scientific and practical value in the field of pediatric and general surgery, pediatric pulmonology and pediatrics.

Assoc. Prof. Hristo Shivachev is currently a leader in the country in the field of pediatric thoracic surgery. His publications in this area include protocols developed in association with maternal and fetal health and neonatology specialists regarding prenatal diagnosis, fetal surgery, follow-up and timing for operative treatment of congenital adenomatous malformation and congenital lobar emphysema (20,14 , 16). Video-assisted thoracoscopic surgery (VATS) for parapneumonic pleural complications in childhood was introduced and described for the first time in Bulgaria (2, 5, 8, 25, 27, 34, 35, 37, 38). The new approach in the diagnosis of PPC and the diagnostic-treatment algorithm have allowed to reduce the need for lung resection from 100 to 8% - a significant practical contribution to pediatric thoracic surgery (9, 11, 12, 23). For the first time in Bulgaria, endoscopic treatment of congenital and acquired stenoses of the trachea and bronchi in children was introduced (21,22,32,39,46,48,49). The team of Assoc. Prof. Dr. Hristo Shivachev for the first time in Bulgaria developed and implemented the mini-invasive technique of Nuss-procedure in the treatment of children with pectus excavatum. The problems and approaches in congenital tracheo-oesophageal fistulas and atresia of the esophagus (21, 27, 35, 51), of foreign bodies in the respiratory tract and esophagus, etc. are considered. The diagnostic algorithm and



staging of tumors in childhood developed and introduced by the author allows to determine the treatment protocol (7, 13, 52). Publications in the field of general, emergency and abdominal surgery are also presented.

The monograph of Assoc. Prof. Hristo Shivachev, which **concerns the diagnosis and treatment of parapneumonic pleural complications in childhood**, has important theoretical and practical significance not only for pediatric surgeons, but also for pediatricians and pediatric pulmonologists. The work is an in-depth and purposeful study of one of the significant problems in pediatric surgery, which is carried out for the first time in our country. The author is one of the leading specialists in the field of pediatric surgery, with extensive clinical experience and organizational skills. The work is created on the basis of unique own experience. The author's efforts to support the information with clinical cases from practice makes the monograph even more valuable. An important contribution of the monograph is the presentation of own experience through the prism of the objective analysis of the available scientific literature, evidence-based medicine and the application of new techniques. The introduction and validation of minimally invasive techniques in pediatric surgery and specifically VATS significantly changed the views on the development and treatment of inflammatory diseases of the lungs and pleura.

The presented scientific production is sufficient in volume and quality to participate in the competition. It exceeds the required and set points both in the National Minimum Criteria and in those adopted by the Scientific Council of the hospital as follows:

Group of indicators	Content	Professor	Professor	Professor
		Required According to the minimum national requirements	Available According to the minimum national requirements	Available According to the requirements of UMHATEM, „N.I.Pirogov”
A	Indicator 1	50	<b>50</b>	<b>50</b>
B	Indicator 2	-	-	-
B	Sum of indicators 2, 3 and 4	100	<b>100</b>	<b>100</b>
Г	Sum of indicators from 5 to 9	200	<b>364.35</b>	<b>1500</b>



Д	Sum of indicators from 10 to 12	100	525	525
Е	Sum of indicators from 13 to the end	100	500	500
Ж	Indicator 23	10		
	or IF	10	33.3	33.3

### **Teaching activity**

Assoc. Prof. Dr. Hristo Shivachev, MD presents a report on teaching hours, which shows that for the last three years there are over 100 teaching hours, working as a member of commissions, including as chairman of the commission for state exam for the specialty "Pediatric Surgery", working as Deputy Editor-in-Chief of the scientific journal "Emergency Medicine". The author has six doctoral students. Two of them defended their dissertations, the first in 2018 and the second in 2020. One doctoral student was expelled with the right to defense, which is forthcoming in May 2022, and the other three are about to complete their dissertations.

### **I agree with proposed contributions**

#### **APPLIED CONTRIBUTIONS**

1. Introduces and develops interventional bronchoscopy in childhood.
2. Introduces and develops the application of VATS in parapneumonic pleuropulmonary complications in childhood.
3. Introduces and develops the application of VATS and laparoscopy in childhood tumors.
4. Introduces and implements the application of VATS in congenital diseases of the mediastinum and diaphragm.
5. Introduces and implements laparoscopic methods in acute appendicitis and ovarian torsion in childhood.
6. Introduces and implements laparoscopic methods in hiatal hernia and plastic replacement of the esophagus in childhood.

7. Introduces and implements the minimally invasive technique for correction of chest deformities.
8. Introduces and implements laparoscopic methods in the treatment of cryptorchidism in childhood.

## SCIENTIFIC AND THEORETICAL CONTRIBUTIONS

1. Development and implementation of the overall protocol of diagnosis and management in parapneumonic pleuro-pulmonary complications in childhood.
2. Development and implementation of a protocol for diagnosis, follow-up and treatment of congenital lung diseases.
3. Introduction and development of a protocol for diagnosis, treatment and staging of tumors in childhood.
4. Introduction and development of a protocol for management of congenital chest deformities.
5. Introduction and development of a protocol for management of non-descending non-palpable testicles in childhood.

## Conclusion:

Assoc. Prof. Dr. Hristo Shivachev is a highly qualified specialist in the field of pediatric surgery, with extensive clinical and teaching experience, innovator, expert and consultant. His works, as well as the joint projects of his team have scientific and practical significance and are a essential contribution to the scientific knowledge in our country.

Based on the personal qualities of the candidate and the evaluation of the submitted documents, I believe that Assoc. Prof. Hristo Shivachev fully meets the mandatory conditions, quantitative criteria and scientometric indicators for holding the academic position "Professor".

For the above reasons, I confidently give a **positive assessment** and propose to the esteemed members of the Scientific Jury to **vote positively** for the election of Assoc. Prof. Dr. Hristo Ivanov Shivachev, MD in the **academic position "Professor" in Pediatric Surgery for the needs of the Clinic of Pediatric Surgery of UMHATEM "N.I. Pirogov" EAD.**

15.11.2021.....

Signature: .....

Sofia

