

## OPINION

**By Assoc. Prof. Rumen Nenkov Harizanov, MD, PhD**

Department "Parasitology and Tropical Medicine" at the National Center of Infectious and  
Parasitic Diseases - Sofia

On dissertation thesis for the scientific award "Doctor of Science"

in higher education: 7. Healthcare and Sport

professional field: 7.1 Medicine

doctoral program/ scientific specialty: Parasitology and Helminthology

Author: Assoc. Prof. Iskra Georgieva Raynova, MD, PhD

**Topic: "HELMINTHOZOONOSES (trichinellosis, toxocariasis and echinococcosis) in humans - epidemiological indicators, distribution, diagnosis and treatment"**

### **1. General presentation of the procedure and the candidate.**

The presented set of materials on paper and electronic media is in accordance with Art. 12 - 14 of the Law for the development of the academic staff in Republic of Bulgaria and with art. 37-43 of the regulations for the application of the Law in NCIPD and criteria set by the scientific board at NCIPD (Attachment 1).

On the topic of the dissertation, five chapters of monographs and 25 publications in national and international editions are presented in full text, 10 of them in editions with impact factor.

### **2. Brief biographical information**

Assoc. Prof. Iskra Georgieva Rainova was born on 05.07.1956 in Sofia. In 1982 she graduated as a Master of Medicine in Medical Academy - Sofia. From 1982 to 1985 she was a district pediatrician at the Regional Hospital, Dupnitsa, and then worked as a residency professor at IV City Hospital, Sofia until 1987. In 1987 she started working in the laboratory "Experimental and Applied Parasitology" at NCIPD. In 1992 she acquired a specialty in medical parasitology, and in 1996 – in clinical immunology. In 2002 she conducted a specialization in diagnostics of parasitic diseases at the Institute of Parasitology in Bern, Switzerland. In 2006 she defended PhD thesis in scientific specialty "Parasitology and Helminthology", and in 2010 was awarded the academic position "Associate Professor". For the period 1994-2011, Assoc. Prof. Iskra Rainova is Head of the laboratory "Experimental and Applied parasitology" at NCIPD and from 2011 to 2016 - Head of the Department "Parasitology and Tropical Medicine" at NCIPD. Since 2016 she holds the position of Deputy

Director of the National Centre of Infectious and Parasitic Diseases, and is responsible for the center's teaching activities.

### **3. Analysis of the dissertation work.**

The problem elaborated in the doctoral thesis is scientifically relevant. Helminthozoonoses included in the study are a serious medical and social problem. With regard to the incidence of cystic echinococcosis and trichinellosis, Bulgaria occupies a leading position among EU Member States, while toxocariasis still has unresolved problems, mainly in terms of global diagnosis.

Assoc. Prof. Rainova has in-depth knowledge of the state of the problem.

The chosen research methodology allows the achievement of the goal set and to receive an adequate answer to the tasks solved in the dissertation. In the dissertation, the classical structure is complied with the following well-balanced nine chapters: introduction, literature review, purpose and tasks, own studies (materials and methods, results) and discussion of results, conclusions, self-assessment of contributions, bibliography, list of publications and summary. The 66-page literature review provides an extensive overview of current knowledge of the etiology, taxonomy, biology, epidemiology, clinical manifestation, diagnosis and treatment of helminthozoonoses (echinococcosis, trichinellosis and toxocariasis).

The study covers an 18-year period (2000-2017) and includes a contingent of 12 312 patients. This gives great credibility to the results obtained. A very thorough epidemiological analysis of the morbidity from the three helminth infections, on which the study was based, has been made, and the doctoral student's personal contributions to the surveillance, control and, in particular, the diagnosis of these diseases are presented very well. The results obtained are very well illustrated with 59 figures and 34 tables. The bibliography includes 427 sources, of which 89 in Cyrillic and 338 in Latin.

The abstract, as content and quality, was prepared according to the requirements and reflects the main results achieved in the dissertation.

### **4. Contributions, publications and importance of the dissertation**

The results obtained and the formulated conclusions and contributions are entirely the merit of Assoc. Prof. Rainova. The author formulates 19 conclusions, deriving from the concrete results of the research and emphasize the relevance of the studies and their theoretical and applied importance. I accept the contributions of the dissertation and I think that they reflect objectively her real achievements. A total of 11 contributions were

summarized, of which four were original, five were scientifically applied and two were confirmatory.

Publications and reports at scientific events are presented as follows:

- ✓ Chapters monographs - 5
- ✓ Publications in Bulgarian and international scientific journals with IF – 10,  
with a total IF-13,369
- ✓ Publications in journals without impact factor - 12
- ✓ Articles in proceedings of scientific congresses and conferences - 3
- ✓ Participation in international congresses and conferences - 9
- ✓ Participation in national congresses and conferences in connection with the  
dissertation - 23
- ✓ Citations - 22
- ✓ Participation in projects - 4
- ✓ Successfully defended dissertations under the guidance of Assoc. Prof.  
Rainova - 3

### CONCLUSION

The dissertation work of Assoc. Prof. Iskra Georgieva Rainova, MD, PhD for the award of the scientific degree "Doctor of Science", fully meets the requirements of the Law for the development of the academic staff in Republic of Bulgaria, the Rules for its implementation and the Rules of the NCIPD.

Therefore, I am convinced of my positive assessment of the research presented by the reviewed above dissertation work, abstract, results achieved and contributions, and I suggest that the members of the distinguished scientific jury vote positively for the award of the scientific degree of "Doctor of Science" to Assoc. Prof. Iskra Georgieva Rainova, MD, PhD in the field of higher education 7. Healthcare and Sports, Professional field: 7.1 Medicine; Scientific specialty "Parasitology and helminthology".

Drafted the opinion: .....

Assoc. Prof. Rumen Nenkov Harizanov, MD, PhD