

REVIEW

Subject. Announced competition for the academic position of *associate professor* in higher education 7. Health and Sport, professional field 7.1. Medicine, *specialty* "Hygiene (incl. occupational, communal, school, radiation, etc.)"

for the needs of the *Department of Hygiene and Epidemiology* at the Faculty of *Public Health*, Medical University - Varna,
published in the *State Gazette*, issue 8 5 as of 08.10.2024.

Candidate (sole applicant): Chief assistant prof. Dr. Albena Borisova Toneva - Stoyanova, Ph.D

Review by: Prof. Dr. Ruzha Zlatanova Pancheva-Dimitrova, Ph.D., member of the Scientific Jury under order R-109-443/05.12.2024 of the Rector of MU - Varna.

1. Brief biographical and professional details of the

Dr. Albena Borisova Toneva - Stoyanova was born on August 27, 1964 in Ruse. After completing her secondary education at the Hristo Botev Secondary School in her hometown, she continued her studies at the Varna Higher Medical Institute, where in 1989 she obtained a diploma in medicine.

Her professional career began in the Regional Health Inspectorate - Varna, where she worked for many years as a resident doctor, gaining solid experience in the field of public health. In 2000, she took up a managerial position as head of the TSC sector and later became head of the CCH department at the RIOKOZ - Varna. During this period, her work was related to the control of public facilities, the assessment and prevention risks to public health.

Her development in the administrative sphere continued when in 2006 she headed the Health Control Directorate in the Regional Health Inspectorate - Varna. The accumulated managerial experience led her to her next role - Head of the Food Control Department at the Regional Food Safety Directorate - Varna, where she was responsible for food safety supervision and compliance with regulatory requirements in the field.

After more than a decade in the field of control and public health, in 2014 Dr. Toneva turned to clinical practice, starting work in the Immunohematology Laboratory of the Regional Center of Transfusion Hematology - Varna. In recent years, she has combined her activity as a physician in the OPM at the Scientific and Research Centre of Military Epidemiology and Hygiene at the Military Medical Academy - Sofia with membership in the Committee on Nosocomial Infections at the MBAL - Varna.

In parallel with her clinical and administrative work, Dr. Toneva has developed an academic career at the Medical University - Varna. Since 2015 she has been part of the Department of Hygiene and Epidemiology at the Faculty of Public Health, where she was initially an assistant professor and since 2020 - a chief assistant professor. Her work focuses on teaching students in various health specialties, and she is actively involved in research in the fields of hygiene, nutrition and public health.

In addition to her professional qualification, Dr. Toneva has a specialization in Nutrition and Dietetics, as well as an additional qualification in homeopathic therapy acquired at the Medical University - Sofia. She is fluent in Russian, understand well German and English.

2. Evaluation of the candidate's scientific activity

Dr. Albena Toneva's scientific activity is focused in the field of hygiene, public health and nutrition, with particular emphasis on the nutritional status of children with neuropsychiatric diseases. Her dissertation work, dedicated to the relationship between nutritional status and quality of life of parents and caregivers of children with such diseases, reflects a deep interest in interdisciplinary aspects of child health and nutrition.

Her publication activity is significant, including **53 scientific articles**, of which **9 have been published in Scopus and Web of Science indexed journals**. These publications cover a variety of topics related to nutrition, hygiene and epidemiology, with an emphasis on public health and disease prevention. In addition to the articles, Dr. Toneva is the author of a **monograph entitled Nutritional Aspects of the "Silent Pandemic" - Autism and Cerebral Palsy in Children**, which presents a systematic analysis of current issues in childhood nutrition and neurological diseases.

The candidate has also played an active role in scientific conferences and congresses, having presented the results of her research at **62 scientific forums**, including **33 poster presentations**. Her participation in these events demonstrates her commitment to the scientific community and her desire to promote and discuss the results of her research in an international context.

In the field of research, Dr. Toneva has participated in **four research projects**, including international initiatives such as the **CD-skills project** (Danube Transnational Interreg Program) and **COMISS** - a project to validate the questionnaire for screening symptoms related to cow's milk protein allergy in infants. In addition, she is part of the **project No. BG-RRP-2.004-0009-C02 "Enhancing Translational Excellence in Medicine (MUVE-TEAM) - Nutrilect" (2023-2026)**, as well as the **project No. 22025 "Molecular**

biomarkers in children with generalized developmental disorder" (2023-2026), funded by the Science Fund at the Medical university Varna.

In general, Dr. Toneva's scientific production is well structured, focused on current and significant problems in public health and child nutrition. It combines empirical studies with analytical and theoretical developments, which demonstrates her contribution to the development of these scientific fields. Her active participation in projects and scientific forums further highlights her research potential and professional commitment

3. Main contributions in scientific works

The scientific contributions of Dr. Albena Toneva cover a wide range of topics in the field of hygiene, nutrition and public health. She has made significant contributions to the study of the nutritional status of children with neuropsychiatric disorders, as well as to the analysis of factors affecting the quality of life of their parents and caregivers.

Contributions to the study of nutrition, growth and neuropsychiatric development of children with neuropsychiatric disorders

- For the first time in Bulgaria, a study of the nutritional status of these children was conducted using biochemical markers and anthropometric indices, applied according to WHO and American Society of Parenteral and Enteral Nutrition (ASPEN) standards.
- The prevalence of malnutrition in these children was studied and significant macro- and micronutrient deficiencies were found, including a **high prevalence of vitamin D deficiency**, which is associated with their cognitive development.
- Specific **nutritional challenges** such as chewing difficulties, swallowing difficulties, gastroesophageal reflux and food selectivity were analysed.

Contributions to the study of the oral status of children with neuropsychiatric disorders

- For the first time in our country, a **comprehensive study of the oral status** of these children and its relationship to their nutritional problems has been done.
- Pathological bites and their role as a risk factor for feeding difficulties are analyzed.
- **Periodontal status** and its influence on the ability to intake various foods was assessed.

Contributions to the study of food allergies in infancy

- **Risk factors** for the development of food allergy in infants have been studied, including **feeding patterns**, mode of delivery, family history of atopy, and early feeding.

- **The relationship between maternal diet** and the likelihood of developing cow's milk protein allergy was assessed.

Contributions to nutrition research during pregnancy and lactation

- **The key role of maternal nutrition** in child neurodevelopment is emphasized, with a focus on deficiencies of folic acid, vitamin D, and omega-3 fatty acids.
- The impact of **environmental pollutants** on fetal brain development is examined.

Contributions to the study of organic food and official food control

- The level of **awareness and consumer behavior** towards organic food in Northeast Bulgaria was assessed.
- **An analysis of the official control system** for organic food and its labelling is made.

Contributions to the study of the quality of life of parents and caregivers of children with neuropsychiatric disorders

- For the first time in our country, **the relationship between parents' quality of life and their children's dietary characteristics** has been studied.
- **Children's health and nutritional problems** have been found to **negatively affect** social relationships and the mental well-being of caregivers.

Contributions to the study of hospital hygiene and nosocomial infections

- **A retrospective analysis** of healthcare-associated infections was conducted and the most common hospital-acquired pathogens were identified.
- **Patient and staff** views on the safety of the hospital environment were surveyed and recommendations for improvements made.

Dr. Toneva's scientific contributions are of **high applied value**, many of which can be used to **develop strategies for monitoring nutritional status**, prevention programs, and improving care for children with neuropsychiatric disorders. She demonstrates **an interdisciplinary approach**, combining knowledge from medicine, nutrition, hygiene and public health to achieve practical solutions in these areas.

4. Teaching

Dr. Albena Toneva has an active and multifaceted teaching activity at the Medical University - Varna, and for many years she has taught students from different specialties in the field of hygiene, ecology and nutrition.

Courses and disciplines the candidate has taught

Within her academic activity, Dr. Toneva has taught in a number of specialties, focusing on subjects related to hygiene, nutrition and public health. Among the courses she has taught are:

- **Hygiene and Ecology** - for medical, dental and rehabilitation students
- **Environment, Nutrition and Health** - for Health Management students
- **Nutritional Hygiene (Part II)** - for the specialty "Public Health Inspector"
- **Nutrition in children with swallowing difficulties** - for speech therapy students
- **Food Safety and Food Legislation** - for the specialty "Public Health Protection and Control"
- **Communal Hygiene (Part II)** - for the specialty "Public Health Inspector"
- **Hygiene of Childhood and Adolescence (Part II)** - for the specialty "Public Health Inspector"
- **Hygiene and Ecology of the Health Care Institution** - for the specialty "Health Care Management"
- **Hygiene of medical institutions and nosocomial infections** - for the specialty "Health Management"
- **Modern concepts in the design of medical institutions** - for the specialty "Biomedical Engineering and Technology"

Participation in curricula and methodological developments

The candidate is actively involved in the development of curricula aimed at improving the learning process in the disciplines related to hygiene and public health. Over the years, she has worked on improving the content and teaching methodology in a number of courses, striving to integrate the latest scientific evidence and practical examples into student learning.

Guidance of graduates and postgraduate students

Dr. Toneva has experience in supervising graduate and postgraduate students, actively supporting the development of young professionals in the field of hygiene and nutrition. Among the theses supervised by her, the topic stands out:

- **"Screening for malnutrition in a children's ward at the emergency hospital of the University Hospital "N. I. Pirogov"**

In addition, she has made a significant contribution to the training of graduate students in Nutrition and Dietetics by facilitating their participation in scientific forums and publication activities.

Dr. Toneva's teaching activity is distinguished by a high commitment to the training of students and an aspiration to enhance their practical training in the field of public health.

6. Administrative and public activities

Dr. Albena Toneva combines her academic and scientific work with active administrative and public activities. She has many years of experience in leadership positions

in various health and control institutions, participates in professional organizations and scientific juries, as well as in expert groups related to public health.

Participation in scientific and professional organisations

Dr. Toneva is a member of various national and international scientific and professional organizations, including:

- **Bulgarian Society of Nutrition and Dietetics**, where he actively participates in scientific forums and discussions related to nutritional status and public health.
- **The Bulgarian Public Health Association**, which is committed to issues related to hygiene, disease prevention and improving health culture.
- **The European Society of Clinical Nutrition and Metabolism (ESPEN)**, which enables it to monitor and apply the latest scientific advances in nutrition.

Administrative posts and management functions

Over the years, Dr. Toneva has held a number of administrative positions and has been involved in the management and organization of health and scientific institutions:

- **Director of the Health Control Directorate at the Regional Health Inspectorate - Varna (2006-2011)** - in this role she was responsible for the implementation of health control in the region, including the monitoring of hygienic conditions in various health and social facilities.
- **Head of the Food Control Department at the Varna District Food Inspection Office (2011-2014)** - in this position she coordinated activities related to food safety, control of production practices and implementation of regulatory standards.
- **Member of the Committee on Nosocomial Infections at the Varna Hospital of the MMA (2021-2024)** - in this committee Dr. Toneva works to improve the measures for prevention of nosocomial infections and control over the safety of the hospital environment.

Activity in scientific juries, editorial boards and expert groups

- He works in **expert groups** dealing with food safety policy analysis and development, nutritional status of vulnerable groups and optimization of hygiene practices in health care facilities.

With her administrative and public involvement, Dr. Toneva contributes to the development of the scientific community and to the implementation of good practices in the field of health control, nutrition and public health.

7. Critical comments and recommendations

Assessment of weaknesses and opportunities for improvement

Dr. Albena Toneva's research and teaching activities are impressive in their volume and scope, covering key aspects of hygiene, nutrition and public health. However, there are several areas where potential for development can be observed:

1. Expanding international cooperation

- While Dr. Toneva has already been involved in international projects, future collaborations with more European and global scientific organizations would contribute to an even wider dissemination of her research.
- Increasing co-authorship with foreign scholars in publications with high impact factor will increase the visibility and impact of her scholarly work.

2. Increased participation in peer-reviewed international journals

- Although the candidate has publications in Scopus and Web of Science, increasing the number of research papers in prestigious international journals with high impact factor will improve her academic profile.

3. Development of digital teaching methods

- Incorporating innovative digital platforms and interactive technologies into teaching would increase teaching effectiveness and student engagement.

4. Formal participation in the management of scientific projects

- Although Dr. Toneva has been involved in various projects, actively leading research teams or coordinating large projects at national and international level would contribute to her career development.

Recommendations for future research and teaching development

- Broadening research themes by applying a multidisciplinary approach, especially in the field of **neurodevelopment and nutrition in children**.
- Organizing additional **courses and trainings** for students and young professionals to cover current trends in hygiene and food science.
- Increase participation in **expert groups and committees** at national and international level to influence public health and nutrition policies.
- Enhancing leadership in **PhD research programmes** and training of young researchers.

8. Conclusion

Summary of the evaluation of the candidate

Dr. Albena Toneva possesses the necessary qualities to hold the academic position of Associate Professor in the field of **Hygiene**. She has a **significant scientific contribution**, proven by her publications, projects and participation in scientific conferences. Her work is

highly interdisciplinary and has practical relevance, especially in the field of child nutrition, prevention of allergic diseases and hygiene control.

Her teaching activities are varied and include both core and specialist subjects. Her involvement in curricula and supervision of graduate and postgraduate students demonstrate her commitment to the academic development of students.

8. Conclusion

The summarized analysis of the aspects presented above show that the scientific metrics, professional qualifications and social authority of Dr. Albena Toneva, Ph.D. fully meet the requirements of the Regulations on the Conditions and Procedures for the Acquisition of Scientific Degrees and Holding the Academic Position of *Associate Professor* at the Medical University *Prof. Dr. Paraskev Stoyanov* - Varna.

Because of this and because of my personal impressions of her academic activity and professional collegiality, I recommend the distinguished members of the Scientific Jury to vote positively for the appointment of the candidate Dr. Albena Borisova Toneva - Stoyanova, Ph.D. to the academic position of *Associate Professor* at the Medical University "*Prof. Dr. Paraskev Stoyanov*" - Varna.

Varna, 10.02.2025.

Signature:

Prof. Dr. Ruzha Pancheva-Dimitrova, Ph.D

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