

Scientific Review

by Prof. Dr. Teodora Todorova Dimitrova, PhD

Deputy Dean Education activity, PHC,

Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

Member of the Scientific Jury under Order No.R-109-260/23.06.2022 of Prof. Dr. Valentin Ignatov, PhD, Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

Regarding: Competition for occupation of academic title “Professor”, in the higher education area 7. „Healthcare and sport”, professional direction 7.1. “Medicine”, ”Hygiene (incl. occupational, communal, school, radiation, etc.)” major, announced in State Gazette issue No. 32 /26.04.2022 for the needs of the “Public health” faculty, department of Hygiene and Epidemiology.

With order No P-109-260/23.06.2022 of Prof. Dr. Valentin Ignatov, MD, PhD – Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna, issued by the Rector of MU – Varna, I’m an elected member of the Scientific Jury (SJ), and according to Protocol №1 of the conducted first meeting of the SJ, I’ve been allocated the duty to prepare a scientific review according to the procedure of occupying the academic title “professor” of the “Hygiene (incl. occupational, communal, school, radiation, etc.)” major. Assoc. Prof. Darina Naydenova Hristova, MD, PhD is the single candidate in the competition. The competition procedures are met and the candidate’s documents are in accordance with the requirements of the Development of the academic staff law in the Republic of Bulgaria, the Rules of procedure for the development of the academic staff in Medical University “Prof. Dr. Paraskev Stoyanov” – Varna and the established in it criteria for occupation of academic title “professor”.

Biographical date and career development:

Assoc. prof. Darina Naydenova Hristova is born in 1975 in the city of Provadia. She graduated with excellent from the Medical University of Varna in 2000. As soon as he graduates, he starts working as a doctor at IHS "FR. Joliot-Curie" and senior expert at NIHW-Varna, and since 2003 in MU-Varna. Since 2003 she has successively goes through academic positions –assistant, senior and chief assistant at the Department of Hygiene, Medical University-Varna. In 2015 she was habilitated as Associate Professor, specialty Hygiene in the Department of Preclinical and Clinical Sciences, Organization and Economics of Pharmacy, Hygiene and Epidemiology, Medical University - Varna.

Assoc. Prof. Dr. Darina Hristova has a specialty in Nutrition and Dietetics. In 2015 she obtained the scientific and educational degree "Doctor" with the topic of the PhD thesis "Nutritional behavior, anthropometric indicators, physical activity and physical ability in underweight, normal and overweight girls". The continuing active academic and applied development through participation in numerous courses and specializations in nutrition,

metabolic health, breastfeeding and healthy nutrition of pregnant and breastfeeding women, principles and techniques for changing the nutritional behavior in consultations of patients on healthy and dietary nutrition, support for breastfeeding, training in "Nutrigenomics: Genetic Testing for Personalized Nutrition" at Dietitians of Canada and becoming part of the first certified team in nutrigenomics in Bulgaria, etc. This rich list of training and certified modules testifies to the active professional development of Associate Professor Naydenova, an experience she actively applies in her teaching and professional activities at the Medical University – Varna.

Current place of work: since 2020 Assoc. Prof. Dr. Darina Naydenova Hristova has been Head of the Hygiene sector at the Department of Hygiene and Epidemiology, Medical University – Varna. The clinical practice of a doctor dietitian is in the medicine clinic "Aesthetic Club" – Varna city.

Membership in professional and scientific organizations: Assoc. Prof. Dr. Darina Naydenova is a member of the Bulgarian Medical Union, National Association "Support for Breastfeeding", "Bulgarian Society of Nutrition and Dietetics", "National Committee on Breastfeeding", Bulgarian Society of Public Health (BSNH), European Society of Public Health (EUPH), Vice-President of "Alumni Club at MU-Varna". Participates as a reviewer in scientific journals and collections: Journal of IMAB, Journal of Biomedical and Clinical Research (JBCR), Scientific Publications of the Union of Scientists – Varna, series Medicine and Ecology, Collections of Reports from International Interdisciplinary Meetings "Alumni Club and Friends", Medical University-Varna, 2020, 2021.

Evaluation of quantitative and qualitative scientific indicators: Darina Naydenova's record shows that the candidate has met the minimum national requirements (MNR) under Art. 2b of the Law on Development of the Academic Staff (LDAS) in the Republic of Bulgaria for taking up the academic position of "PROFESSOR" (Table 1).

Table 1. Information on compliance with the minimum national requirements

Group of indicators	Contents	PROFESSOR (skor)	Points of Assoc. Prof. D. Naydenova
A	Indicator 1	50	50
B	Indicators 3 or 4	100	100
C	Sum of points for indicator 5 - 9	200	212
D	Sum of points for indicator 10-12	100	125
E	Sum of points for indicator 13-22	100	243.29

In the competition for AD "Professor" Assoc. Prof. Naydenova participated in addition to dissertation, monograph (habilitation thesis), 3 textbooks and 3 teaching tools, a total of 15 scientific publications (excluding those submitted for the academic position of "Associate Professor"). Of these:

1. Full text publications in scientific publications referenced and indexed in world-

renowned databases with scientific information (Scopus and Web of Science) – 5 publications.

in: Journal of IMAB (3), Folia Medica, Journal of Biomedical and Clinical Research;

2. Full text publications in magazines – 6 publications.

in: Chronicles BATHS, Medinfo, Science Pulmology, Varna Medical Forum (2), Food Safety - Some Global Trends. INTECH.

3. Full text publications in collections reports from scientific forums in Bulgaria – 3 publications.

in: Proceedings from the Jubilee Scientific Conference with the international participation of the Bulgarian Society of Nutrition and Dietetics, Book of Proceedings - Symposium "Alumni Club and Friends" - Medical University - Varna, Journal of the Union of Scientists-Varna - Medicine and Ecology Series;

4. Published abstracts of reports from scientific forums abroad in a magazine with impact factor – 1, in European Journal of Public Health. (1)

In addition, Assoc. Prof. Naydenova has presented 8 full text publications and one abstract (4 of them referenced and indexed in Scopus and Web of Science), outside the minimum national requirements for the academic position of "PROFESSOR".

From the actual publications in journal, monograph and collections, Assoc. Prof. Naydenova is the first author in 3/13.6% /articles; second author in 11 /50%/articles and third and consecutive author in 8 /36.4%/articles.

The total number of citations with which Assoc. Prof. Naydenova participates in this competition is **12**, of which **6** citations is in referred and indexed journals in world-famous databases with scientific information (Scopus and Web of Science), **2** in a monograph and collective volumes and **4** in non-referred journals.

Brief description of the research activity: The main scientific topics in Dr. Naydenova's publications are related to nutrition and dietetics in different age and population groups. In the attached to the competition documents are formulated contributions in 7 main scientific directions as follows:

I. Eating disorders and alternative eating patterns

(C 3, D 7.3, D 8.3)

II. Vitamin D in the genesis of obesity and its role as an epigenetic factor

(D 7.1, D 8.1)

III. Recommendations for feeding in maternity and early childhood

1. Nutritional intake of n-3 fatty acids in pregnant and lactating women (during maternity)

(D, 7.2)

2. Micronutrient status, reproductive problems and foetal programming of metabolic disorders

(D8.2, Suppl. 4)

3. Breastfeeding practices

(Suppl. 9)

4. Vitamin B12 status in nursing and early childhood

(Suppl.2)

IV. Food allergies in infancy

(D 7.5, D 8.5, D 8.8)

V. Nutrition, nutritional status and physical activity in adolescents

1. Nutritional behaviour, anthropometric parameters, dental status and physical activity in adolescents in 12th grade

(A 1, D 7.6)

2. Physical activity and nutritional status in adolescents with adolescent idiopathic scoliosis (Suppl. (1) (Suppl. (3) (Suppl. 7)

3. Effect of choreography on fatigue and school success in primary students

(D 7.4)

VI. Functional foods and beverages

1. Coffee as a functional drink used in overtime and night shift in fatigue prevention

(D 8.6, Suppl. 5)

2. Coffee consumption for workers in conditions of noise and vibration

(Suppl. 8)

3. Antioxidant composition of raspberry fruit juice (*Rubus idaeus*)

(Suppl. 6)

VII. Nutrition, health risk and food culture among consumers

1. Biological hazards in food

(D 8.7)

2. Food supplements and informed consumer choice

(D 8.4, D 8.9)

The first thematic areas 'Nutritional behaviour and alternative eating patterns' presents generalised scientific data on etiopathogenesis, diagnostic criteria, psychoprofile, course and complications, as well as therapeutic approaches in eating disorders. Screening tests are described to identify subclinical disorders in order to prevent severe eating disorders. Published clinical cases of eating disorders among pregnant women draw attention to the serious deficiencies of macro- and micronutrients, risks to reproductive health and to offspring. The monograph includes 10 cases of different types of eating disorders from the author's clinical practice. They outline algorithms for solving real, concrete diagnostic and therapeutic tasks.

In the chapter "The role of vitamin D in the etiology of obesity and its importance in epigenetics", a thorough review of the pleiotropic effects of vitamin D in terms of metabolic disorders was carried out.

The following strands are focused on "Recommendations for nutrition in maternity and early childhood", "Nutritional allergies in infancy", "Nutrition, nutritional status and physical activity in adolescents". Nutrition and nutritional status have been studied in different populations – pregnant and breastfeeding women, infants, teenagers. Evidence of the risks of the development of dangerous food deficits as a result of inadequate dietary intake is provided. Both the negative and favorable characteristics in the feeding pattern in the described population groups were identified. Recommendations for nutrition and supplementation of children with idiopathic adolescent scoliosis have been formulated.

The Functional Food and Beverage chapter extensively examines the effects of coffee consumption on workers under different risk factors of the working environment (night work, mental tension, noise, vibration). Recommendations for safe consumption of coffee as a tonic drink in the workplace are provided.

In chapter 7 'Nutrition, Health Risk and Nutrition Culture among Consumers' some current biological risks and chemical hazards in food have been investigated.

Teaching activity:

Assoc. Prof. Naydenova's teaching experience is over 17 years. She trains students and graduates from the Faculty of Public Health, the Faculty of Medicine, the Faculty of Dental Medicine, the Faculty of Pharmacy and the specialities from the Medical College Varna. This workload in recent years over 338 teaching hours, which is over the standard of 180 hours of teaching. The range of subjects in the teaching palette of assoc. prof. Naydenova includes Bachelors-Speech Therapy, Hygiene and Ecology, Environment and Health-Masters, Masters Public Health (Russian and Bulgaria), Environment, nutrition and health - Masters in Health Management, Nutrition and dietetics - Masters, Rehabilitation, Wellness and spa, Food safety - Master's program in Safety and control of public health, Hygiene of nutrition - bachelors-Inspectors in public health, Current problems of nutrition of healthy and sick people – facultative course for Masters in medicine and Dental medicine, Current problems of nutrition of healthy and sick people, Pharmacomedical aspects of nutrition and others. For the past 3 years Assoc. Prof. Naydenova is the Chairman of the state examination committee for

the acquisition of the medical specialty "Nutrition and Dietetics". She is the co-author of 4 textbooks and 3 teaching materials that are used to teach students hygiene and ecology for the specialties of pharmacy, medicine, dentistry, for medical colleges, etc. Actively participates in the training of students, specialists in "Nutrition and Dietetics", SPE (courses for specialization in postgraduate education) trainings (initiator, organizer and lecturer of SPE courses) in the field of child nutrition and development, breastfeeding, early childhood intervention (attendance and e-learning). Assoc. Prof. Naydenova is the author of a program, manager and lecturer at the SPE "Eating disorders – a problem of the 21st century. Opportunities for response and therapy" (2019), lecturer at SME "Support for breastfeeding", 2019, Lecturer at SPE "Nutrition during the first 1000 days", attendance and e-learning, 2019-2020 She manages graduates from various master's programs in the public health faculty.

Participation in projects:

Assoc. Prof. Darina Naydenova Hristova participates in a number of national and regional educational program and research projects: "Green Light for Breastfeeding", funded by Varna Municipality, "Health Today and Tomorrow – Voluntary Youth Information Campaign" with the partnership of MU-Varna, ASMB-Varna and funded by Varna Municipality. Participation in a three-year project of the Karin Dom Foundation on "Early intervention to prevent the abandonment of children with disabilities", a six-month project "Healthy eating – an element of young people's lives", funded by Varna Municipality, a six-month project of INNER WHEEL CLUB VARNA EUROPEA "Forward to EXPO Milan, Health and Food for Happiness: Teaching the Young People of Varna to Cook Healthy Food", co-financed by Varna Municipality, "Biodynamic Agriculture for the Creation of Functional and Healthy Cereals", funded by the Agricultural Academy (2016-2017), Head of a scientific project, approved by KENNY in the Eastern Bulgaria region " (2018-2020), a scientific project, approved by KENNY in the Medical University of Varna on "Nutritional Status and Physical Activity in Life on the Development of Cardiovascular Diseases ", a project, approved by KENNY in the Medical University of Varna – Idiopathic Adolescence Scoliosis in the City of Varna" (2018-2020), "Alternative Nutrition Patterns in Girls from Greece". Varna – prevalence and risk factors" "Research on the influence of diet and lifestyle on the development of cardiovascular diseases in the region of Eastern Bulgaria" "Express method for research on the relationship between optical properties and antioxidant effect of extracts of medicinal plants and drinks from traditional fruits ", " Micronutrient status of pregnant women", "Control of trade in biologically produced agricultural products and foods in Northeastern Bulgaria" (2020 so far), " Micronutrient supplementation in patients with type II diabetes on metformin treatment " (2020 so far), "Effectiveness of low histamine diet in patients with irritable bowel syndrome ", " Nutritional allergies of the breastfeeding age in Pleven region – risk factors and behavior "(2018-2019), " Student practices" project funded by " Human Resources Development " and the European Social Fund.

Guide for graduates: Assoc. Prof. Naydenova works individually with graduates from the specialties Preservation and Control of Public Health, Pharmaceutical Management and Rehabilitation, Sea Treatment, Wellness and SPA, whose activity has led to the successful defense of 11 Master theses.

Doctoral student's guide: Assoc. Prof. Dr. Naydenova is the supervisor of eight doctoral students from the MU – Varna in the doctoral program "Hygiene (*incl.* occupational, communal, school, radiation, etc.). The result of this scientific and teaching activity are two successful defenses of the Ph. D.

Conclusion:

Based on the materials presented to me for the competition and on my personal impressions of Assoc. Prof. Dr. Darina Naydenova Hristova, I'm convinced that she fully meets the requirements of the Development of the academic staff law in the Republic of Bulgaria, The rules of procedure for its implementation and the Rules of procedure for the development of the academic staff in Medical University "Prof. Dr. Paraskev Stoyanov" – Varna and the laid down criteria for the occupation of academic title "Professor". This is why I give my positive assessment for the selection of Assoc. Prof. Dr. Darina Naydenova Hristova for Professor in the scientific specialty "Hygiene (incl. occupational, communal, school, radiation, etc.)" for the needs of the "Public health" faculty, department of Hygiene and Epidemiology at the Medical University of Varna.

August 25, 2022

Varna

Reviewer:



(Prof. Dr. Teodora Todorova Dimitrova, PhD)

