

To the Chairperson of the Scientific Jury,
Appointed by order of the Rector of
Medical University - Varna R-109-259/06.06.2025

REVIEW

by Assoc. Prof. Dr. Atanaska Petrova Elenkova, MD, DM

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Member of the Scientific Jury for the competition for the academic position of "Associate Professor"
in Higher Education Area 7. "Health and Sports",
Professional Field 7.1. Medicine,
Specialty "Endocrinology" at MU-Varna, Faculty of Medicine,
Second Department of Internal Medicine / Endocrinology Teaching Unit and Clinic of Endocrinology and
Metabolic Diseases at University Hospital "St. Marina" – Varna,
according to the announcement in State Gazette No.30/08.04.2025

INFORMATION ABOUT THE PROCEDURE

By order of the Rector of MU – Varna (№ R-109-259/06.06.2025r.) and by decision of the Scientific Jury (Protocol № 1/17.06.2025), I was appointed to prepare a review of the candidate in the competition for the academic position of "Associate Professor" at MU – Varna and University Hospital "St. Marina" – Varna in the specialty "Endocrinology."

The competition is conducted in accordance with the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its implementation at MU – Varna.

Only one candidate has submitted documents for participation in the competition – Assistant Professor Dr Radina Dimitrova, PhD.

The documents provided to me fully comply with the procedural requirements.

I. BRIEF BIOGRAPHICAL DATA ABOUT THE CANDIDATE

Dr. Radina Stoyanova Dimitrova graduated in *Medicine* from the Medical University – Varna in 2010. She began working as a physician at the University Hospital "St. Marina" in 2011. Three years later, in 2014, she became part of the team at the Clinic of Endocrinology at the same university hospital, and in 2018, she obtained a specialty in *Endocrinology and Metabolic Diseases*.

Her academic career began as an Assistant Professor at MU – Varna after winning a competitive selection process in 2016. In 2022, she earned a PhD degree after successfully defending her PhD thesis titled "*Comparative Characteristics of Metabolic Markers in the Assessment of Bone Health in Postmenopausal Age*." Since the same year, she has held the position of Senior Assistant Professor at the Second Department of Internal Medicine at Medical University – Varna.

Dr. Radina Dimitrova is proficient in English, both written and spoken.

II. SCIENTIFIC RESEARCH ACTIVITY

1. Publications:

In the competition for the academic position of *Associate Professor*, the candidate Dr. Dimitrova participates with a total of **18 publications** (16 in Bulgarian and 2 in English), categorized as follows:

- **Dissertation Thesis:** 1 (*indicator A1: 50 pts*);
- **Habilitation Work (Monograph):** 1 (*indicator B3: 100 pts*);
- **Full-text Articles Published in Scientific Journals Indexed and Referenced in International Scientific Databases (Scopus/Web of Science):** 4 articles;
- **Full-text Articles Published in Non-Refereed but Peer-Reviewed Scientific Journals:** 12 articles.

Dr. Dimitrova is the **first author** in 8 of the articles.

2. Conference Papers with Published Abstracts in Proceedings of National Congresses and Conferences: Dr. Dimitrova has presented **2 papers** with published abstracts in the proceedings of national congresses and conferences.

Total score (G7–G8): 208.54 pts

3. Citations

Dr. Dimitrova participates in the competition with **7 citations** (*excluding self-citations*), corresponding to a total point value of **60 (D10–D12)**. These citations refer to **5 of her publications** and are distributed as follows: 1 citation in a scientific journal indexed and referenced in internationally recognized scientific data bases; 3 citations in 2 peer-reviewed scientific monographs; 3 citations in non-indexed but peer-reviewed scientific journals.

4. Profile of the Candidate's Scientific Work

The scientific work of Dr. Dimitrova is characterized by thematic consistency and practical relevance. Her main scientific and practical contributions can be summarized in the following focus areas:

4.1. Bone Health: Prevention and Treatment of Osteoporosis (*A1; B3; G7.3; G8.5; G8.7; G8.12*). In this domain, Dr. Dimitrova has authored scientific works dedicated to the assessment of bone integrity in various risk groups. Her dissertation explores the interrelation between multiple metabolic markers and bone health in postmenopausal women and proposes a diagnostic and therapeutic algorithm based on individual risk profiles.

Particular emphasis is placed on factors such as body weight, arterial hypertension, disturbances of uric acid, carbohydrate and lipid metabolism, and the treatment of these conditions, all of which have a demonstrated impact on bone integrity (*Indicator A1; Publications: G7.3; G8.7*).

In one of her submitted publications, Dr. Dimitrova discusses the role of GLP-1 receptor agonists not only in bone formation and resorption homeostasis in healthy individuals but also in the recovery process of pathologically altered bone (*Publication G8.5*).

Osteoporosis in men is a topic with numerous debatable issues, ranging from screening programs and the identification of risk groups to the accurate assessment of quantitative and qualitative bone parameters and the precise assessment of fracture risk within the context of an individualized therapeutic approach (*Indicator B3; Publication G8.12*).

In this regard, Dr. Radina Dimitrova's monograph dedicated to osteoporosis in men is both current and practically oriented.

Osteosarcopenia, one of the leading geriatric syndromes, is addressed in another of the candidate's publications (*Publication G8.12*). The focus is on the synergistic effect of the loss of bone and muscle mass and strength on fracture risk, immobilization, reduced quality of life, and increased mortality in this age group. The importance of this issue in males is emphasized, highlighting the need for early recognition of osteosarcopenia and timely interventions aimed at reducing the health and social consequences in old age.

4.2. Thyroid Pathology: Diagnosis and Treatment (*Indicators: G7.1; G7.2; G8.1; G8.11; G8.13*)

Dr. Dimitrova explores research topics related to the role of thyroid function not only on somatic health but also on the psycho-emotional state of the patient. The main themes can be summarized as follows:

Skeletal Effects of Thyroid Dysfunction (*G7.1, G8.1, G8.13; Appendix 19: Report 8*). The negative impact of thyroid dysfunction on bone integrity is analyzed. The adverse consequences of untreated hypothyroidism are considered both in childhood (growth retardation, ossification disorders, and permanent delay in bone age) and in adulthood (reduced bone turnover and increased fracture risk).

The effect of levothyroxine replacement therapy is studied in pathogenetically distinct forms of primary hypothyroidism—autoimmune, postoperative, or post-radiation hypothyroidism—in patients with Graves' disease and thyroid carcinoma. Systematized management guidelines are presented, emphasizing the need for an individualized approach in long-term follow-up.

Thyrotoxicosis, as an important cause of secondary osteoporosis, represents another aspect of the candidate's scientific work. The mechanisms of increased bone turnover leading to loss of bone mineral density, even in subclinical forms or during prolonged suppressive levothyroxine therapy, have been defined. Attention is drawn to the role of triiodothyronine via thyroid hormone receptors TR α in osteoclast activation, as well as the potential role of suppressed TSH levels.

Diagnostic and therapeutic challenges in thyroid pathology constitute another significant focus of Dr. Dimitrova's research (*Publication G8.11; Appendix 19: Reports 5 and 11*). Special emphasis is placed on the role of TSH-receptor antibodies (TRAb) as a highly specific and sensitive immunological marker for Graves' disease, determining the clinical manifestation and progression of the disorder.

4.3. Diabetes Mellitus – Modern Therapeutic Approaches (*Based on publications G8.3, G8.4, G8.10 and Appendix 19: Publication 18*)

In her research, Dr. Radina Dimitrova addresses key aspects of contemporary diabetes mellitus treatment, with particular focus on personalized therapeutic strategies and emerging trends in the management and monitoring of these patients.

Special attention is given to latent autoimmune diabetes in adults (LADA) (*G8.3*). In accordance with current guidelines, a comprehensive therapeutic concept is presented that aims not only at achieving good glycemic control but also at preventing cardiovascular complications, which remain the leading cause of mortality in this patient group.

The role of medications providing cardiorenal protection, such as GLP-1 receptor agonists and SGLT-2 inhibitors, and their synergistic effects when used in combination, is emphasized (*G8.4; Appendix 19: Publication 18*). The advantages of fixed-dose combination therapies, which improve patient compliance, are also highlighted (*G8.10*).

4.4. Rare Endocrine Diseases (*Indicators: G7.4; G8.2; G8.6; G8.8; G8.9; Outside – 1*)

As a specialist regularly engaged in the diagnosis and treatment primarily of rare endocrine diseases, I would like to emphasize that this diverse pathology remains a significant challenge in modern clinical practice. The main difficulties arise from the low prevalence of these diseases, their nonspecific and often variable clinical presentations within a single nosological entity, and the necessity for specialized diagnostic approaches and experienced clinicians. Consequently, these diseases are often diagnosed late and frequently improperly treated.

Even with correct and timely diagnosis, access to adequate modern treatment is difficult, as reimbursement by the National Health Insurance Fund (NHIF) is limited to a list of specific diseases, which further compromises the effectiveness of therapy and worsens the quality of life and prognosis for

these patients. Patients with rare endocrine diseases should be treated in specialized expert centers by multidisciplinary teams. Sharing clinical cases from real practice and publishing up-to-date literature reviews would help raise awareness and sharpen the attention of clinicians from various specialties towards the targeted search for rare endocrine diseases.

In this field, Dr. Dimitrova has authored **7 publications**:

- *Primary Intra-Thyroid Non-Hodgkin Lymphoma (Publication G7.4);*
- *Thyrotoxic Periodic Paralysis (Publication G8.2);*
- *Endocrine Disorders in Beta-Thalassemia Major (Publication G8.6);*
- *TSH-Producing Pituitary Adenoma (Publication G8.8);*
- *Thyroid Hormone Resistance Syndrome (Publication G8.9);*
- *Spontaneously Resolved Acromegaly with Developed Panhypopituitarism (Additional publication)*
- *Familial Variant of Medullary Thyroid Carcinoma (Appendix 19: Reports 10).*

These papers represent excellent examples illustrating the diagnostic and therapeutic challenges of rare endocrine diseases.

III. Teaching Activity

Dr. Radina Dimitrova has held the position of Assistant Professor at Medical University – Varna since 2016, and since 2022 she has been a Senior Assistant Professor at the Second Department of Internal Medicine. Over the past five years, she has maintained an average annual teaching load of 237.6 hours, which includes practical exercises and delivering lectures to medical and medical cosmetology students studying in Bulgarian.

Dr. Dimitrova also delivers lectures within theoretical endocrinology courses designed for specialist physicians in training.

She is a supervisor of two endocrinology residents.

She regularly participates in semester and state examination committees for medical students, doctoral candidates, and assistants within the Endocrinology Unit at Medical University – Varna.

IV. Diagnostic and Therapeutic Activity

Dr. Radina Dimitrova has over ten years of experience in clinical endocrinology as a physician at the Clinic of Endocrinology and Metabolic Diseases at University Hospital “St. Marina” – Varna. In her daily clinical practice, she routinely performs highly specialized medical procedures such as thyroid ultrasound and ultrasound-guided fine-needle aspiration biopsy in the cervical region, for which she was certified in 2019.

As a member of the "Endocrine Tumors" subcommittee, she regularly participates in multidisciplinary discussions and therapeutic decision-making for patients with this pathology. Dr. Dimitrova is also a member of commissions responsible for preparing expert opinions and issuing treatment protocols for high-cost medications and medical devices reimbursed by the National Health Insurance Fund (NHIF) for patients with diabetes mellitus, growth hormone deficiency, acromegaly, prolactinoma, hypoparathyroidism, and osteoporosis.

She has participated as a sub-investigator in three international clinical trials of new therapies for type 2 diabetes mellitus – SUSTAIN 11, PIONEER PLUS, and REIMAGINE 2.

CONCLUSION

Senior Assistant Professor Dr. Radina Stoyanova Dimitrova, PhD, participates in the competition with research and teaching activities that meet the requirements regulated by the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), as well as the internal regulations of Medical University – Varna (MU Varna Rules). Her scientometric indicators fulfill the minimum requirements of MU Varna for the academic position of "Associate Professor," with the total score accumulated according to Appendix 1 exceeding the required minimum of 400 points across the relevant categories.

Her scientific production covers several key areas in the field of endocrinology and presents both theoretical and practical contributions. The presented publications and participation in medical forums characterize Dr. Radina Dimitrova as a thorough researcher with solid theoretical preparation and clinical experience.

Her active involvement in teaching and the scientific-educational process establishes her as a highly qualified academic teacher in the education of medical students and endocrinology residents.

In view of the above, I consider that the candidacy of Senior Assistant Professor Dr. Radina Stoyanova Dimitrova, PhD, fully meets the criteria for the academic position of "Associate Professor" and I propose that the esteemed scientific jury vote positively for her appointment to this position in accordance with the needs of Medical University – Varna.

Date: 27.08.2025

Assoc. Prof. Dr Atanaska Petrova Elenkova, DM

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§1, б. „В“ от Регламент (ЕС)
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