

STATEMENT

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Regarding: competition for the academic position of "**Professor**" in the field of higher education **7. Health and sports**; professional field **7.1. Medicine** and scientific specialty "**Endocrinology**", for the needs of the Second Department of Internal Medicine, Faculty of Medicine at the Medical University "Prof. dr. P. Stoyanov" - Varna and the Clinic of Endocrinology and Metabolic Diseases at the University Hospital "St. Marina" EAD - Varna, announced in the State Gazette, issue 64 of 05.08.2025.

1. Information for the procedure

On the basis of Order No. R-109-421 of 03.10.2025 of the Rector of the Medical University of Varna, I have been elected as an **internal member** of the Scientific Jury in the procedure for occupying the academic position "Professor" in the Second Department of Internal Medicine, Faculty of Medicine, Medical University - Varna and the Clinic of Endocrinology at the University Hospital "St. Marina" EAD - Varna. After the first meeting of the scientific jury (Protocol No. 1/13.10.2025), I have been appointed as **chairman** to prepare a statement on the competition.

The statement has been prepared in accordance with the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) and the Regulations for its implementation at the Medical University - Varna. All procedural requirements for announcing the competition, the deadline for submitting documents and the selection of the scientific jury have been met.

The candidate in the competition is assoc. prof. dr. Mira Valentinova Siderova, MD, PhD

2. Biography and professional development

Assoc. prof. Mira Siderova was born in Varna. She received her secondary education at the First Language High School of Varna, studying English and German. She graduated from the Medical University of Varna in 2003 with full honors and the Rector's Golden Hippocrates Award. From 2004 to 2005, she worked at the Clinic of anesthesiology

and intensive care of the St. Anna Hospital in Varna, and from 2006 to the present, she has been a full-time doctoral student, resident, assistant and associate professor at the Department of Endocrinology of the Medical University of Varna and at the Clinic of Endocrinology, St. Marina Hospital. In 2008, she completed a three-month specialization at the University Hospital in Bari, Italy, as part of the international Erasmus program. In 2011, she acquired a specialty in endocrinology and metabolic diseases, and in 2013, she defended her dissertation on the topic "Immunohistochemical markers and ultrasound elastography - new diagnostic options in the management of thyroid nodules". In 2017, she became an associate professor in Endocrinology. From 2022 to the present, she has headed the Second Department of Internal Medicine at the Medical University of Varna, and since 2023, she has also headed the Endocrinology Clinic at the University Hospital "St. Marina" Varna.

Assoc. prof. Siderova has undergone numerous additional specializations, including highly specialized activities such as ultrasound of the neck and fine-needle aspiration biopsy under ultrasound control of the thyroid and parathyroid glands, lymph nodes and tumor formations in the neck. She has also participated in practical courses of the European Thyroid Association, dedicated to ultrasound, thyroid cytology and laser thermoablation of thyroid nodules. She has also completed specializations in the field of diabetology (Steno Diabetes Center) and bone osteodensitometry. Assoc. prof. Siderova is a member of the European Thyroid Association (ETA), International Osteoporosis Federation (IOF), Bulgarian Society of Endocrinology (BDE), Union of Scientists - Varna. She speaks English, German, Russian and Greek languages.

3. Scientific and research activity

From the reference for scientific production it is evident that assoc. prof. Siderova presents herself with the following:

Indicator A 1. Dissertation for the acquisition of the "PhD" degree in the scientific specialty "Endocrinology" - 1 issue; 50 points

Realized after habilitation:

Indicator B4. Publications equivalent to habilitation work in refereed and indexed in world-renowned databases of scientific information - 11 issues; 295 points

Indicator Г7. Publications and reports published in scientific publications, refereed and indexed in world-renowned databases of scientific information - 13 issues; 224 points

Indicator F8. Publications and reports published in non-refereed journals with scientific review or published in edited collective volumes - 32 issues; 403.61 points

Indicator F9. Published chapter of a collective monograph - 1 issue; 20 points

Indicator D10. Citations or reviews in scientific publications, referenced and indexed in world-renowned databases of scientific information or in monographs and collective volumes – 20 issues; 300 points

Indicator E12. Citations or reviews in non-refereed journals with scientific review - 9 issues; 45 points

Indicator E14. Supervision of successfully defended doctoral students – 3 PhD students, 100 points

Indicator E15. Acquired medical specialty – 1 issue, 40 points

Indicator E18. Supervision of a national scientific or educational project – 1 issue "Bone health and fracture risk in men depending on androgen status", unfinished.

Indicator E 20. Published chapters in a university textbook – 1 issue; 1.53 points

Indicator E22. Training of interns, postgraduates and doctoral students (seminars and practical classes) – 30 points

The total **impact factor** of assoc. prof. Siderova is 21.234, participating in the competition with IF 9.171 (after habilitation).

Additionally, 3 publications beyond the minimum scientometric requirements for holding the title of professor, unused in other competitions, and a list with a total of 71 participations in international and national forums are attached.

The total number of calculated scientometric indicators of the candidate assoc. prof. Mira Siderova is **1509 points** with a required minimum of 550 points and exceeds the requirements for holding the title of professor 3 times.

4. Scientific achievements and contributions

The scientific papers and research results of assoc. prof. Mira Siderova submitted for participation in the competition cover the period 2017 – 2025 and can be divided into six main scientific areas:

- **Diseases of the thyroid gland**

Nodular goiter and malignant thyroid nodules are the main focus of the candidate's scientific research. Particular attention is paid to differentiated thyroid carcinoma - the most common malignant endocrine tumor, which often presents as nodular goiter. The publications analyze the diagnostic, therapeutic and follow-up approaches in thyroid cancer, with an emphasis on the precise ultrasound differentiation between benign and malignant nodules and the role of the interdisciplinary team. The concept of active surveillance in low-risk papillary microcarcinomas as an alternative to immediate surgical treatment is also discussed. Some of the publications present rare cases of thyroid tumors - lymphoma, familial medullary carcinoma and metastases from other primary tumors (e.g. from the tongue and ovary). They are illustrated with clinical, imaging and immunohistochemical data, which contribute to a more accurate diagnosis and correct therapeutic approach, especially in distinguishing primary from secondary thyroid neoplasms.

Another part of assoc. prof. Siderova's scientific output is dedicated to thyroid-associated ophthalmopathy (TAO) - the most common and debilitating extrathyroidal manifestation of thyroid autoimmunity. The mechanisms of the disease, the criteria for assessing activity and severity, as well as new therapeutic approaches beyond standard steroid therapy are reviewed. A group of articles also investigate the relationship between thyroid dysfunction and bone metabolism, and correlations of TSH receptor antibodies with bone mineral density and fracture risk are studied. Systemic effects of hypothyroidism, e.g. on lipid metabolism, as well as thyroid effects of new medications in oncology are also studied. Research in the field of thyroidology has a high clinical and scientific contribution - they offer a better understanding of pathogenesis, introduce new therapeutic approaches and emphasize the need for an individualized approach.

- **Sarcopenia in endocrine diseases**

Sarcopenia is a loss of muscle mass, strength and function, leading to disability and an increased risk of mortality. While primary sarcopenia is associated with aging, some endocrinopathies can cause secondary sarcopenia. The relationship between thyroid dysfunction and sarcopenia was studied by analyzing anthropometric, biochemical parameters, body composition, grip strength and walking speed in women with newly diagnosed hyperthyroidism. It was found that reduced TSH is associated with reduced muscle mass (ASMI), lower grip strength and slowed gait. Among the scientific and applied contributions of this study is the proposal for assessing grip strength as a simple and informative marker of muscle health in hyperthyroidism. The involvement of the musculoskeletal system in men with androgen deprivation therapy (ADT) for prostate cancer was also studied. A significantly higher 10-year fracture risk was found in ADT. Along with the SARC-F questionnaire and the grip strength study, an interdisciplinary team also measured the skeletal muscle index (SMI), assessed using [68Ga]Ga-PSMA-11 PET/CT imaging, performed within the framework of oncological staging. The data are of

exceptional scientific and practical contribution, supported by a publication in a refereed foreign journal with an impact factor.

- **Parathyroid pathology**

Scientific research covers hyperparathyroidism in its various forms. A debilitating form of primary hyperparathyroidism - "osteitis fibrosa cystica" with extremely severe bone deformities, not encountered in our time, has been described. Secondary hyperparathyroidism in chronic kidney disease is the subject of scientific research in a joint study with the dialysis clinic with an assessment of serum levels of bone-specific alkaline phosphatase, osteocalcin and vitamin D. Other publications are focused on the ultrasound detection of hyperplastic parathyroid glands in secondary hyperparathyroidism. Valuable for clinical practice is the determination of the PTH level above which hyperplasia of the parathyroid glands is visualized among these patients. Tertiary hyperparathyroidism has also been studied with a detailed presentation of the clinical manifestation, laboratory and imaging findings, the complexity of treatment and the limitations of non-surgical treatment to achieve biochemical control. Collaboration between endocrinologists and surgeons ensures better postoperative outcomes and a better quality of life.

- **Diabetes mellitus and diabetic neuropathy**

Part of assoc. prof. Siderova's publications are dedicated to the new classes of glucose-lowering drugs – GLP-1 receptor agonists and SGLT2 inhibitors, which have changed the overall therapeutic concept in type 2 diabetes mellitus, cardiovascular diseases and chronic kidney disease. Challenges in clinical practice are examined, as well as the real application of these organ-protective drugs among diabetics who passed through a university center for a period of one year, and progress in the implementation of international recommendations in real clinical practice is demonstrated. Another publication examines the possible relationship between type 2 diabetes mellitus and increased oncological risk, emphasizing the potential antitumor benefits of metformin. The editing of the book "Type 2 Diabetes - from pathophysiology to modern treatment", IntechOpen, 2019, is of educational and scientific value. Some of Assoc. prof. Mira Siderova's publications are dedicated to diabetic sensorimotor neuropathy, covering pathogenesis, therapeutic approaches and innovative non-pharmacological interventions. The studies dedicated to high-energy MLS-laser therapy in diabetic neuropathy with original data from joint studies with physiotherapy specialists are of significant scientific and practical contribution.

- **Metabolic disturbances in adrenal and gonadal pathology**

Metabolic syndrome parameters were studied among patients with adrenal non-secreting incidentalomas, as well as in drug-induced hypogonadism in men. The results

confirm the metabolic risk and emphasize the need for detection, monitoring and timely treatment of metabolic disorders, especially lipid and carbohydrate abnormalities, in men with prostate cancer undergoing hormonal therapy.

- **Rare endocrine diseases**

These scientific publications of the candidate are dedicated to rare endocrine diseases, which represent a serious diagnostic and therapeutic challenge. Clinical cases of "extinguished" acromegaly have been reported; casuistic TSH-producing pituitary adenoma; thyroid hormone resistance syndrome in co-authorship with Prof. S. Refetoff; Innovative treatment approach in the treatment of a patient with hypercortisolism through adrenal superselective arterial embolization; Growth hormone deficiency and its replacement in the transitional age and others. The publications have a high practical and scientific contribution – they present rare but clinically significant cases, introduce innovative diagnostic and therapeutic approaches, encourage interdisciplinary cooperation and lay the foundation for creating a solid database for rare endocrine diseases.

5. Teaching and learning activities

The teaching and learning activities of assoc. prof. Siderova began in 2008 as a part-time assistant, then from 2015 as an assistant, from 2017 as an associate professor and include:

- Training of students from the Bulgarian and English-language programs in the form of practical seminars and lectures; training of interns, pharmacy students;
- Postgraduate training of specialist doctors and doctoral students;
- Training in the highly specialized activities for endocrinologists;
- Participation as a lecturer in a number of national scientific forums;
- Participation in state and semester examination committees of students in "Internal Medicine", exams for enrollment in specialization in Endocrinology and conducting colloquiums of specialists in Endocrinology.

She has been a member of the state examination committees in Endocrinology and metabolic diseases since 2021 and chairs it since 2024.

The total teaching and learning workload of assoc. prof. Siderova for the last 4 academic years is an average of 832 hours (208 hours/year with a required minimum of 100 hours/year). Assoc. Prof. Siderova is the head of the specialization in Endocrinology and Metabolic Diseases for a total of 8 doctors, 5 of whom have successfully acquired a specialty and three are still in training. She is the scientific supervisor of 6 doctoral students, 3 of whom have successfully defended their dissertations.

6. Diagnostic and therapeutic activities and personal impressions

I have direct observations of the daily clinical work of assoc. prof. Mira Siderova from her first steps in endocrinology and internal medicine to the present. Over the years,

she has gained a lot of experience, which, together with her interest in learning new methods, has turned her into an established specialist endocrinologist, whom many patients trust. In her work with younger colleagues, students, doctoral students and residents, she is demanding and tries to convey a desire for continuous professional improvement.

Assoc. prof. Siderova regularly participates in multidisciplinary teams and specialized committees engaged in the complex diagnostics and treatment of patients with endocrine diseases (Endocrine Tumors Committee at St. Marina University Hospital), as well as being a member of specialized committees for prescribing expensive medications and medical devices reimbursed by the National Health Insurance Fund for the treatment of patients with type 1 and 2 diabetes mellitus, growth hormone deficiency, hyperprolactinemia, acromegaly, and disorders in calcium-phosphorus metabolism. She supports oncology unit in monitoring of patients with thyroid carcinoma with a prepared management algorithm, conducts their ultrasound follow-up, determines individual risk and therapeutic goals.

7. Conclusion

Based on the scientific papers of assoc. prof. Mira Siderova provided to me for review and analysis, as well as considering her overall career development, I believe that she fully meets the qualitative and quantitative criteria for holding the academic position of "Professor", according to the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for its implementation and the Regulations on the terms and conditions for acquiring scientific degrees and holding academic positions at MU-Varna. All this gives me reason to vote **positively** and confidently propose to the members of the esteemed scientific jury to award assoc. prof. dr. Mira Valentinova Siderova, MD, PhD the academic position of "Professor" in the scientific specialty "Endocrinology" in the Second Department of Internal Medicine, Faculty of Medicine at MU-Varna and the Clinic of Endocrinology and Metabolic Diseases at UMHAL "St. Marina" EAD - Varna.

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