

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**

Head of the First Clinic of Endocrinology, USHATE "Acad. Ivan Penchev"  
Department of Endocrinology, Faculty of Medicine, Medical University - Sofia

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 Rules for its implementation at the Medical University – Varna.

Documents for participation in the competition have been submitted by one candidate – Senior Assistant Professor Dr. Savi Rinaldiev Shishkov, PhD.

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

## I. BRIEF BIOGRAPHICAL DATA ABOUT THE CANDIDATE

Dr. Savi Rinaldiev Shishkov graduated in Medicine from the Medical University – Varna in 2017. In the same year, he was enrolled as a resident at the Clinic of Endocrinology and Metabolic Diseases at University Hospital “St. Marina” – Varna. In 2018, he won a competition for the position of Assistant Professor at the Second Department of Internal Medicine, Endocrinology Unit, and was enrolled as a full-time PhD student.

In 2021, he obtained a specialty in “Endocrinology and Metabolic Diseases.” That same year, he also completed a Master's degree in Health Management. In 2023, he successfully defended his PhD thesis on the topic “*Androgen Levels in Men with Acute and Chronic Coronary Syndrome*,” thereby earning the educational and scientific degree “Doctor.”

Since 2023, Dr. Shishkov has held the position of Senior Assistant Professor at the Clinic of Endocrinology and Metabolic Diseases at University Hospital “St. Marina” – Varna.

He is a member of the Bulgarian Society of Endocrinology, the European Society of Endocrinology (ESE), and the European Neuroendocrine Association (ENEA).

He is proficient in both written and spoken English and German.

## II. SCIENTIFIC RESEARCH ACTIVITY

### 1. Publications

The candidate participates in the competition with **15 publications** – 10 in Bulgarian and 5 in English:

- **Dissertation Thesis** – 1 (Indicator A1; 50 pts.)
- **Habilitation Work (Monograph)** – 1 (Indicator B3; 100 pts.)
- **Book based on the PhD thesis** – 1 (Indicator G6; 40 pts.)
- **Chapter in a teaching manual** – 1 (Indicator G9; 5 pts.)
- **Full-text articles published in scientific journals indexed and referenced in global scientific databases (Scopus/Web of Science):** 5 (4 with Impact Factor)
- **Full-text articles published in non-indexed peer-reviewed journals:** 6

Dr. Shishkov is the first author in 8 of the articles.

**2. Abstracts published in proceedings of international congresses (ESPE, ECE):** 5

**Total score (Indicators G7–G8): 205.1 pts.**

### **3. Citations**

Dr. Shishkov participates in the competition with **6 citations** (excluding self-citations), with a **total of 60 points** (Indicators D10–D12), distributed as follows:

- 3 citations in scientific journals that are indexed and referenced in internationally recognized scientific databases;
- 3 citations in non-indexed, peer-reviewed journals

### **4. Profile of the Candidate's Scientific Work**

Dr. Savi Shishkov's research activity covers five main thematic areas in the field of endocrinology: androgens in cardiovascular diseases; rare endocrine disorders and the transition from childhood to adulthood; diagnosis and treatment of thyroid pathology; diabetes mellitus; and psychosomatics.

#### **4.1. Androgens in Cardiovascular Diseases**

Dr. Shishkov investigates the role of gonadal function in men with atherosclerotic cardiovascular diseases. The main results are presented in his dissertation, one monograph, and seven scientific publications (two of which are in peer-reviewed journals). The topic is relevant due to the growing need to supplement the classical risk factors for ischemic heart disease with new hormonal and metabolic markers.

Some of the contributions described in the dissertation are related to the study of the association between DHEA-S and renal function, and for the first time, the cortisol/DHEA-S and testosterone/LH ratios have been analyzed in patients with acute coronary syndrome (ACS). Confirmatory findings include correlations between low androgen levels, coronary artery disease, and diabetes mellitus, as well as the dynamics of total testosterone levels following an ACS event.

The publications presented in this category provide original findings on the testosterone/estradiol ratio and the role of free testosterone as a predictor of cardiovascular risk. Literature reviews on testosterone replacement therapy in cardiac patients and gonadal dysfunction in chronic kidney disease are also included.

These studies contribute both theoretically and practically to the interdisciplinary management of such patients.

#### **4.2. Rare Endocrine Diseases and Age-Related Transition**

This thematic area includes a monograph (B3), one publication in a journal with an impact factor (IF=2.8; Q2) (G7.4), two articles in non-peer-reviewed journals (G8.1 and №1 outside the minimum scientometric requirements), and presentations at national and international medical forums (G7.2, G7.3, G7.5, G8.3).

Dr. Shishkov's monograph introduces for the first time in Bulgarian literature the concept of "organized transition" — a systematic process of transferring patients from pediatric to adult endocrinologists. The candidate provides a comprehensive review of international experience and scales for assessing readiness for

transition in patients with chronic endocrine diseases. The monograph concludes with algorithms and practical recommendations for a comprehensive medical and psychosocial transition.

The publications and presentations in this field address key aspects of the transition process in rare endocrine diseases. An international survey (G7.2, G7.4) conducted among 30 expert centers highlights the difficulties in structuring the transition, particularly in pituitary disorders. The candidate's developed and validated questionnaire for assessing readiness for transition was presented at the European Congress of Endocrinology (ECE) in 2024 (G8.3). Dr. Shishkov has presented reports at two consecutive annual meetings of the European Society for Pediatric Endocrinology (ESPE). In 2022, the candidate presented a comprehensive five-year clinical experience evaluating the effectiveness of adolescent follow-up, and in 2023, the benefits of early growth hormone treatment in Prader-Willi syndrome. An additional publication describes a rare clinical case of so-called "burnt-out" acromegaly (publication No. 1 outside the minimum requirements).

#### **4.3. Thyroid Pathology**

The reports in this area discuss clinical cases illustrating diagnostic challenges in thyroid pathology (G7.6, G8.6). The role of TRAb (thyrotropin receptor antibodies) as a diagnostic and prognostic marker in patients with Graves' disease is discussed, including cases of "switching" between different antibody types, which alters the clinical course of the disease and complicates treatment.

Dr. Shishkov also describes a rare case of intrathyroidal B-cell lymphoma (G7.7), emphasizing the need for careful differential diagnosis and long-term follow-up.

#### **4.4. Diabetes Mellitus**

The candidate's scientific work in this field illustrates the histomorphological changes in diabetic retinopathy (G8.2) and in severe diabetic fetopathy associated with decompensated maternal diabetes (G7.1). The contributions in this area have practical applications: guidelines for improved methodology for early diagnosis of diabetic retinopathy and the introduction of an individualized approach for the prevention of diabetic fetopathy.

#### **4.5. Psychosomatics**

In this research area, Dr. Shishkov developed a chapter in a textbook for medical students presenting the spectrum of psychiatric manifestations in certain endocrine diseases and the therapeutic approach depending on the etiopathogenesis and clinical presentation (G9.1).

### III. TEACHING ACTIVITY

Dr. Savi Shishkov has over 7 years of experience as a university lecturer, including 5 years and 4 months as an Assistant Professor, and in the last 1 year and 8 months as a Senior Assistant Professor. His teaching load by academic year is as follows:

- 2019/2020 – 336 teaching hours of practical exercises
- 2020/2021 – 206 teaching hours of practical exercises
- 2021/2022 – 171 teaching hours of practical exercises
- 2022/2023 – 203 teaching hours, including 5 lecture hours
- 2023/2024 – 231 teaching hours, of which 11 are lectures

Dr. Shishkov conducts practical exercises in endocrinology for medical students studying in both Bulgarian and English. He delivers lectures to English-speaking medical students, primarily on topics related to diabetes mellitus. He also participates in teaching medical professionals specializing in Obstetrics and Medical Cosmetology.

Dr. Shishkov serves on examination committees for semester and state exams for students in both Bulgarian- and English-language programs. He has also contributed to drafting test questions for internal medicine exams for the Medicine specialty.

Alongside regular teaching, the candidate actively contributes to postgraduate education by participating in training seminars for endocrinology residents within the core theoretical courses.

### IV. RESEARCH PROJECTS

During the period 2018–2025, Dr. Savi Shishkov has participated in 2 research projects funded by the “Science Fund” program of Medical University – Varna:

- **“Dynamics of serum levels of male sex steroids in men after acute coronary syndrome”** – the main project on which the candidate’s PhD thesis was based to obtain the educational and scientific degree “Doctor.”
- **“Bone health and fracture risk in men depending on androgen status”** – a project investigating the relationship between hormonal profile and risk of osteoporotic fractures in men.

### V. DIAGNOSTIC AND THERAPEUTIC ACTIVITY

Dr. Savi Shishkov is an established specialist in the field of endocrinology, building his clinical experience both at UMHAT “St. Marina” – Varna and through participation in qualification programs and specializations at prestigious national and international centers. Notable specializations include:

- Specialization at the University Medical Center in Leiden, Netherlands, under the exchange programs of the European Reference Network for Rare Endocrine Conditions (ENDO-ERN), with a

primary focus on recombinant growth hormone replacement therapy and transitional care for patients moving from pediatric to adult healthcare.

- Certification course in neck ultrasonography (HSA “Ultrasound of the neck region”)
- International **Europit** course dedicated to pituitary pathology.

Dr. Shishkov’s commitment to continuous professional development and improvement is further demonstrated by his participation in numerous online trainings, practical seminars, and scientific conferences covering various areas of endocrinology and interdisciplinary fields.

He regularly participates in multidisciplinary teams and specialized commissions involved in the complex diagnosis and treatment of patients with rare endocrine diseases. He is a member of multidisciplinary clinical groups providing highly specialized expertise for patients with hypopituitarism, hypoglycemic conditions, rare forms of diabetes, and Prader-Willi syndrome. Long-standing collaboration with pediatric endocrinologists from the team of Prof. Violeta Yotova at UMHAT “St. Marina” has allowed him to develop a comprehensive view of rare endocrine pathology across different age periods and to consolidate his experience and knowledge in the field of the “transition” period — one of his main scientific interests.

Additionally, Dr. Shishkov is a member of specialized commissions for prescribing high-cost medications and medical devices reimbursed by the National Health Insurance Fund (NHIF) for the treatment of patients with type 1 and type 2 diabetes, growth hormone deficiency, hyperprolactinemia, acromegaly, and calcium-phosphorus metabolism disorders.

## CONCLUSION

The comprehensive clinical, research, and teaching activities of Dr. Savi Rinaldiev Shishkov establish him as a distinguished endocrinologist with a patient-centered approach and the ability to collaborate effectively within interdisciplinary teams. He is a rigorous researcher contributing to multiple specialized areas within endocrinology and a highly qualified academic instructor.

The submitted documentation and scholarly output of Dr. Shishkov fulfill the minimum scientometric criteria set by Medical University – Varna for the academic rank of Associate Professor.

Following a thorough and critical evaluation of the candidate’s overall scientific, pedagogical, and clinical performance, I hereby provide a favorable assessment and strongly recommend that the esteemed scientific committee confer upon Dr. Savi Shishkov the academic title of Associate Professor in the specialty of Endocrinology, professional field 7.1 Medicine, within the higher education sector 7. Healthcare and Sports, to serve the needs of the Second Department of Internal Diseases at Medical University “Prof. Dr. Paraskev Stoyanov” – Varna.

**Date: 28.08.2025**

**Assoc. Prof. Dr Atanaska Petrova Elenkova, DM**

Заличено на основание чл. 5,  
§1, б. „В“ от Регламент (ЕС)  
2016/679

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