

To The chairman of the scientific jury,  
determined by Order № R 109-193 / 3.6.20  
of the Rector of the Medical University – Varna

## Review

From **Prof. Boryana Petrova Deliyska**, DMS,

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Scientific specialty "Nephrology", Department of Nephrology, Medical University-Sofia

Subject: Competition for the academic position "**Professor**" in the field of higher education 7. Health and sports, professional direction 7.1. Medicine and scientific specialty "**Nephrology**" for the needs of "II Department of Internal Medicine" Scientific sector: nephrology, dialysis and toxicology in the Faculty of Medicine at Medical University of Varna, announced in the State Newspaper No. 8 / 28.01.2020

The only candidate admitted to the competition is Assoc. Prof. Svetla Vasileva Staykova, DMS

### 1. Career profile

Assoc. Prof. Svetla Vasileva Staykova was born in 1963. After completing her medical education she have been worked on distribution in a health section – municipality Rouen. Sinnce 1995 she has been started working at MU-Varna and gradually grew from assistant to senior and chief assistant. Since 2018 she has been head of the Nephrology and Dialysis Clinic. Assoc. Prof. Dr. Svetla Staykova has 2 acquired specialties: internal medicine (1993) and nephrology (1996). Since 2001 she has been a "Doctor of Medicine", since 2015 - "Associate Professor" and since 2018 is a "Doctor of Medical Sciences". She has an additional qualification in Doppler and Vascular - ultrasound and health management.

Assoc. Prof. Svetla Staykova has over 25 years of teaching experience. She teaches students from 3rd and 5th year "Medicine" in the disciplines: Internal Medicine (Propaedeutics), Nephrology and Toxicology and has 250 lectures and exercises per year. Assoc. Prof. Svetla Staykova participates in examination commissions for students and graduates, as well as in State examination commissions for awarding the specialty "Pediatric Nephrology" at Medical University of Varna and "Nephrology" at Medical University of Sofia.

She is a member of a number of scientific juries for acquiring an academic position and educational-scientific degree, both in MU – Varna and in MU - Sofia.

Assoc. Prof. Svetla Staykova has supervised 6 PhD students, 1 of which has successfully finished her dissertation, and 5 work successfully on their PhD thesis. She was been also the supervisor of 5 graduates.

## **2. Analysis of the submitted materials for the competition**

Assoc. Prof. Staykova participated in the competition with 57 scientific publications after holding the academic position of "Associate Professor".

The scientific papers are distributed as follows:

Dissertation for "Doctor of Science", defended in 2018 on the topic: "Diagnosis and treatment of mineral bone disorders in patients with CKD on conservative and dialysis treatment".

Participation in the preparation of books, textbooks : 4

Full-text publications in scientific journals and collections - 29, as 7 in international medical periodicals and 3 publications in print.

Of the real works, she is the first and independent author in 16, the second - in 8, the third and consecutive author in 9.

The presented materials are divided into five groups according to the NACID classification:

Equivalent to monographic work full-text publications in scientific journals with impact factor - 10 issues

Scientific publications and reports referred to in world-famous databases with scientific information in foreign and Bulgarian scientific journals, which have an impact factor - 18 issues.

## **Analysis of the contributions related to the main directions of the scientific works**

Contributions related to the developed dissertation for "Doctor of Science" are of theoretical and practical nature. As the main ones I accept the in-depth analysis of bone-mineral metabolism in CKD, the monitoring of biomarkers related to it such as: FGF-23, Klotho, osteocalcin and bone-specific alkaline phosphatase, adenomatous changes of the parathyroid glands, as well as the proposed algorithm for complex and individualized behavior in early and advanced disorders of bone and mineral metabolism.

**The main areas that have been developed cover all sections of the specialty - nephrology and are summarized as follows:**

DIRECTION 1 concerns problems related to factors for the progression of chronic kidney disease (CKD), disorders of bone and mineral metabolism, use of highly specific biomarkers, as well as the application of complex and individual therapeutic behavior.

The importance of proteinuria was investigated in connection with the identification of patients at high risk for progression of CKD and related cardiovascular pathology. Newer non-invasive biomarkers such as cystatin C, neutrophilic gelatinase-associated lipocalin, N-acetyl- $\beta$ -D-glucosaminidase, beta-2-microglobulin, retinol-binding protein, alpha-glutathione-S-transferase, and liver fatty acid-binding protein (L-FABP) have been developed. It is proposed to introduce them in clinical practice, as well as a panel of markers that correlates better with the prognosis of CKD. With monitoring of proteinuria, albuminuria,  $\beta$ -2 microglobulin, creatinine, osmolality, the results were validated at the regional level with a recommendation to use them in clinical practice.

In connection with the renal osteodystrophy in CKD, an in-depth literature analysis of osteocalcin was performed, based on 4 main and large information portals. Subsequently, in real practice, the indicator was studied in diabetics, and a significant difference in its levels was detected in CKD with normal parathyroid hormone in dialysis treatment compared to the pre-dialysis stage. Analyses of the imaging methods for the assessment of the parathyroid glands in secondary hyperparathyroidism in CKD have been performed. Early diagnosis of the complication has been reported to be important for the inclusion of treatment to prevent bone and cardiovascular changes. The effect of selective receptor activators on vascular calcifications, overall and cardiovascular mortality and survival of patients with CKD was analyzed. Selective vitamin D-receptor activator has been found to significantly lower PTH levels compared to non-selective activators, as well as reduce periods of hypercalcaemia, while patients have a lower incidence of hospitalizations and shorter hospital stays.

DIRECTION 2 is related to the analysis of psychological problems in patients with CKD. The relationship between them and the medical staff is analyzed, as well as the quality of life is determined. A modified version of a questionnaire on the quality of life of patients with CKD, as well as the impact of the disease and dialysis treatment on the personal and emotional state of patients. A high degree of depression and anxiety has been reported, and it is recommended that psychological problems be taken into account in the complex treatment of patients. It has been observed that the duration of dialysis treatment reduces the willingness of patients to cooperate, as well as the need for adequate information related to therapy and HDR. A study on "Burnout syndrome" was conducted among the staff of the dialysis center.

Oral supplements have been shown to improve protein-energy malnutrition, and decreased levels of serum albumin, cholesterol, and increased CRP are signs of this complication.

Some causes of erythropoietin resistance have also been analyzed, such as inflammation, urinary tract infection, malnutrition, inadequate dialysis, hyperparathyroidism and aluminum toxicity.

DIRECTION 3 includes developments related to congenital and hereditary diseases and anomalies in children and adults with CKD.

The location of CT and MRI for diagnosis of horseshoe kidney is reported. Three generations of a family with genetically proven Alport syndrome have been described. This area includes developments regarding oligomeganephrony, the nephrotoxic effect of cisplatin, problems with obesity in young people.

DIRECTION 4 includes works related to urinary tract infections, and data on this pathology in dialysis patients and the elderly have been followed. An analysis of the results of a screening campaign for the establishment of CKD in the Varna region was conducted.

TO DIRECTION 5 are developments related to the location of some new biomarkers for the diagnosis of early renal damage. Of interest are the data on the use of these biomarkers in  $\beta$ -thalassemia major and a proposal for their introduction into clinical practice.

DIRECTION 6 has a significant practical-applied character, as algorithms are proposed for specifying the adequacy of dialysis treatment, diagnosis and therapeutic behavior in complications of this treatment, as well as vascular access in patients with end-stage renal disease. The possibility of selection of vascular access with Doppler - ultrasound for better visualization of the vascular wall and quantification of blood flow is considered. A proposal has been made for the formation of an accurate algorithm in the country for vascular access, as well as analysis of catheter-associated infections.

DIRECTION 7 includes developments related to plasmapheresis as an element of the complex treatment of primary and secondary glomerulopathies with monitoring the effectiveness of the method to achieve permanent remission, analysis of indications and complications of the procedure.

Assoc. Prof. Staykova participates as a co-author in the following collective monographs:

Urinary tract infections, "Nephrology Handbook", Svetla Staykova STENO -2018

Vascular access for hemodialysis "Handbook of Nephrology", Svetla Staykova STENO-2018

Urinary tract infections in the elderly and senile, "Modern Geronto Nephrology" Svetla Staykova, D. Paskalev. UI "St. Kliment Ohridski", 1999

**The candidate has participated in 3 published university textbooks:**

**Vascular ultrasound** - edited by Prof. Kr. Ivanov, MD and Assoc. Prof. V. Petrov, MD , which has developed the chapter "Ultrasound of vascular access" ISBN: 978-619-7137-38-5, 2015. It examines various aspects of vascular ultrasound, and it is intended for doctors and students, surgeons and internists, specialists and practitioners.

**Practical handbook of nephrology and clinical cases on kidney disease** ISBN: 978-619-221-056-4, 2017. The guide is of practical and scientific importance on the issues of nephrological diseases and methods for their treatment in the final stage of CKD. It is suitable for

students, postgraduates, trainee doctors and specialists in nephrology, internal medicine and general medicine, with practical guidelines for this pathology.

**Handbook of Nephrology and Renal Replacement Treatment** ISBN 978-619-221-166-0, 2018 is intended for students, graduate students and interns at MU-Varna. The main modern nosological units in nephrology are presented, as well as the current renal replacement methods.

Assoc. Prof. Staykova has been participated in the development of the following international and educational projects:

1. Anemia Studies in CKD: Erythropoiesis via a Novel PHI Daprodustat – Non- Dialysis (ASCEND – ND), Compound number : GSK 1278863, 2017, Principal Investigator
2. Familiar hypercholesterolemia - a clinical trial in patients in dialysis and pre-dialysis stageSOAL, 0023 , 2018-2020, Sub Investigator
3. Periodic screening of the levels of activity of alpha - galactosidase in Fabry disease in patients in the clinic of nephrology and dialysis - MHAT "St. Marina "and at Hamburg University Medical Center, Centogene - The Rare Disease Company from 2016 - to the present, Sub Investigator
4. Project BG05M20P001 - 2.002-0001 "Student practices phase 1", implemented with financial support of OP NOIR and EU, 2014-2020, Supervisor (mentor for training organization)
5. A novel treatment for patients with IgA nephropathy. A randomized, double-blind, placebo-controlled phase 3 trial of the safety and efficacy of OMS721 in patients with IgA nephropathy (ARTEMIS – IGAN) Protocol N:OMS 721-IGA – 001, 2019, Principal Investigator
6. Multicenter non-interventional post-authorization safety study (NI – PASS) to monitor the incidence of relevant and expected rare adverse events including lack of efficacy among CKD patients receiving s.c. Binocrit or Epoetin alfa HEXAL Study protocol number : HX575-507, 2018, Principal Investigator
7. „Identification of the reasons for the high epidemiological activity of Chronic kidney disease in Dulgopol municipality, district Varna ”, N19 Science Fund - MU Varna, 2019, Project Manager

The reference prepared in the library of MU - Varna (Cited reference №74 / 20.02.2020) states that the scientific works of Assoc. Prof. Svetla Staykova are cited a total of 13 times, and by indicators are divided into 3 groups:

- 1) Citations or reviews in scientific journals, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes - 6 pcs.

2) Citation in monographs and collective volumes with scientific review - 2 pcs.

3) Citation or review in unrefereed journals with scientific review - 5 pcs.

Based on information from the author and automated information from foreign databases from WEB of Science, Scopus and Google Scholar, Assoc. Prof. Dr. Svetla Staykova has a total of 135 points according to the list of citations.

*Impact factor:*

A reference from the library of MU - Varna, indicates Impact factor from the publications of Assoc. Prof. Svetla Staykova - 12,698, and her total IF is 28.78 of all scientific papers.

### **5. Teaching activities**

The submitted academic report for the last 5 years reports more than twice the workload of Assoc. Prof. Prof. Staykova according to the regulations of MU-Varna.

I have no critical remarks and recommendations to the candidate. I do not know any data on plagiarism.

### **Conclusion**

Based on the above data, I accept that the candidate - Assoc. Prof. Svetla Vasileva Staykova meets the mandatory and specific conditions, as well as scientometric criteria and indicators for holding the academic position of "Professor of Nephrology", according to LDASRB, the Rules for its implementation and the Rules for the structure and activity of MU-Varna.

**I recommend the esteemed members of the Scientific Jury to vote positively for the candidate Assoc. Prof. Svetla Vasileva Staykova for the position of "Professor" of Nephrology for the needs of the Faculty of Medicine, Second Department of Internal Medicine, Board of Nephrology, Dialysis and Toxicology and The Clinic of Nephrology, St. Marina University Hospital, Varna.**

24.06.2020r.

Prof. Dr. Boryana Deliyska, DMS

