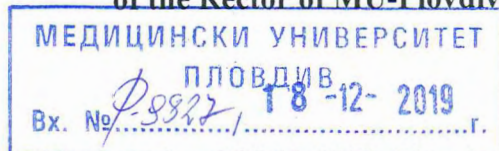


**To the Chairman of the Scientific Jury  
appointed with Order No P-2340/28.10.2019  
of the Rector of MU-Plovdiv**



According to the protocol of the first session of the Scientific Jury dated 05.11.2019, I hereby present Opinion in relation with the competition for acquiring academic position Associate Professor for the needs of the Department of Neurology, Faculty of Medicine, Medical University – Plovdiv (announce in State Gazette No 61/02.08.2019).

Prof Penka Atanasova Atanasova, DMSc, internal member of the Scientific Jury

**Scientific Specialty:** Neurology

**Institution:** Clinic of Neurology, UMHAT “St George” EAD, Plovdiv  
Department of Neurology, Medical University – Plovdiv

**Address and contacts:**

4002 Plovdiv, 66 Peshtersko Shose Blvd

Email: [p\\_a7@abv.bg](mailto:p_a7@abv.bg)

Phone: 0888 837 352

The Opinion is prepared in compliance with the requirements of the Law for the Development of Academic Staff in the Republic of Bulgaria (LDASRB), and Section III/IV of the Rules for implementation of the LDASRB - Conditions and order for the occupation of the academic position “Associate Professor”/ “Professor”.

## OPINION

by Prof Penka Atanasova Atanasova, DMSc

regarding the competition for academic position Associate Professor  
for the needs of the Department of Neurology, MU – Plovdiv

### I. Brief biographic and career information

Dr Georgi Svetoslavov Slavov, MD is born on 27.10.1986. He graduates his secondary education in 2005, the French High School “Antoine de Saint-Exupéry”, Plovdiv, and is fluent in French and English. In 2011 he acquires Master’s degree in Medicine at Medical University Plovdiv. In 2012, after a competition, he is appointed for doctoral student at the Department of Neurology of MU-Plovdiv. Until now he has been working as neurologist at the Clinic of Neurology, University Hospital “St George” EAD, Plovdiv. After defending dissertation work “Clinical-laboratory study of serum levels of Vitamin D and cytokines in patients with relapsing-remitting multiple sclerosis”, he obtains an educational and scientific degree “Doctor of Philosophy”. He is consecutively appointed as Assistant Professor and a Chief Assistant Professor at the Department of Neurology, and in 2017 he acquires a specialty in nervous diseases.

Dr G. Slavov, both during his doctoral studies and currently, continues to work on improving his professional qualification in a very well developed, and traditional for the Department, problematic area of immune-mediated neurological diseases, without losing interest in the rest of the neurological pathology. In 2019, Dr G. Slavov acquired qualification for highly specialized activity “Evoked potentials”. He is a member of the specialized committees at the National Health Insurance Fund for multiple sclerosis and epilepsy. His professional path is related to participation in a number of courses for additional clinical and scientific profiling at home and abroad, such as: a course on “Emergency resuscitation procedures for patients with acute stroke” at the clinic of Anaesthesiology and Intensive Care of St George University Hospital (2016); a course in neuroimmunology at the 13<sup>th</sup> European School of Neuroimmunology in Porto, Portugal (2013); a course at the Bavarian Chamber of Physicians in Munich, Germany (2014). Dr G. Slavov is a participant in the inter-university project “Functional cytokine gene polymorphisms and cognitive dysfunction in patients with multiple sclerosis” (completed 2016) and is a leading researcher for Southern Bulgaria on the project “Season- and latitude-dependent regulation of the vitamin D – klotho / FGF23 system

in healthy persons” (international project, funded by University of Southern Denmark, completed in 2017).

Dr G. Slavov participates in the teaching of medical students, trainee doctors, general practitioners, nurses, including in English. He is a member of the Bulgarian Society of Neurology, the Union of Scientists in Bulgaria – Plovdiv Branch and the Bulgarian Medical Association.

The analysis of Dr Georgi Slavov’s professional development shows a steady tendency for professional growth.

## **II. Applied scientific work and related contributions**

For the competition, Dr G. Slavov presents a complete set of administrative and scientific documents that meet the requirements of LDASRB 2018, and the Rules of the MU – Plovdiv.

**43 scientific papers are presented:** 1 dissertation thesis for educational and scientific degree “Doctor”; 1 independent monograph; 1 chapter in a monograph in English; 1 chapter in a neurology textbook for medical college students; 27 articles (6 with Thomson Reuters impact factor, 5 in SJR journals, 11 in referenced journals and 16 in non-referenced collections); 12 scientific reports (5 in Bulgarian and 7 in international editions). Dr G. Slavov is the first author in 25.92% and the second author in 44.44% of the publications in full text.

A major part of Dr G. Slavov's research activities are neuroimmune diseases, of which multiple sclerosis is the first. The contributions are in three scientific fields: multiple sclerosis, rare diseases in neurology with immune-mediated pathology, and other aspects in neuropathology. The main contributions of Dr Georgi Sv. Slavov are in the first two scientific fields.

### **Research-theoretical and applied contributions to the field of “multiple sclerosis”**

- For the first time in Bulgaria, in patients with relapsing-remitting multiple sclerosis (RRMS), is proven complicity of 25(OH)D in the etiopathogenesis of the disease: Vitamin D immunomodulatory activity on the risk of MS, inverse relationship between the deficiency severity and the serum levels of 25(OH)D, a high relative share of the persons with deficiency during relapse. These data warrant the study of the therapeutic potential of Vitamin D in RRMS, monitor the serum concentrations of 25(OH)D for the treatment and prophylaxis of hypovitaminosis D (Dissertation thesis, I.5, I.8, II.1, II.4). His publications on the subject have been cited 9 times, including in journals with IF = 4.37, IF = 5.964. Dr G. Slavov is invited and participates in

Neurological Disorders Summit, San Francisco, 2015, and in an international project for the study of geographically dependent regulation of Vitamin D. He is also a lead researcher on the project for Southern Bulgaria, participated in the writing of a chapter in a collective monograph in English.

- For the first time in Bulgaria, the role of single nucleotide polymorphisms in immune dysregulation is investigated in a patients with RRMS, their relation to the risk of MS, as well as the degree of neurological and cognitive deficit. The importance of the functional polymorphisms rs1800869 in IL10/-1082A/6, rs17860508 and rs3212227 in IL12 as a risk factor for MS in the Bulgarian population is proved; the homozygous carriage of the -1082AA-genotype in IL10 increases the risk of MS after 30 years of age; a differential effect of rs17860508 and rs3212227 in IL12 on the genetic predisposition to MS and the disease course in males and females was reported, mediated by a sex-dependent effect on IL12 production of p40 and IL12 (I.9, I.10).
- For the first time in Bulgaria, the participation of the female sex hormones (FSH) estradiol/ progesterone in the risk of MS and its pathogenesis is investigated. The data demonstrate the suppressive effect of estradiol/ progesterone on the secretion of anti-inflammatory cytokines TNF- $\alpha$ , IFN- $\gamma$  inverse relationship between 25(OH)D, and the degree of neurological deficit in relapse, protective effect of progesterone and 25(OH)D in MS risk. The data contribute to the validation of a new hypothesis – the involvement of the FSH estradiol/ progesterone in the risk of MS, and in the pathogenesis of the disease, and justifies further studies on the effect of treatment with the FSH preparations to improve the control of immune dysregulation (I.7, II.2).

#### ***Confirmatory scientific contributions***

- Of clinical relevance and practical importance is the established relationship between the IgG concentrations in CSF, the deficiency rate, the age of first morbidity and the IgG index (II.6). The data is of predictive value and practical importance. Of significant scientific and theoretical importance is the lower incidence of pain with a positive oligoclonal profile in the Bulgarian population compared to the North European. These results are a prerequisite for further studies to elucidate the probable causes: number and location of lesions, immunogenetic difference in HLADRB1 locus, etc. The causal relationships between the number of attacks, the duration of the disease, the fatigue syndrome, the depressive manifestations and the cognitive dysfunctions (II.10, II.11, II.12) is confirmatory. An original contribution is the data

of involvement of the proinflammatory cytokines IL17 and TNF- $\alpha$ , in the modulation of cognition. The author has publications in an IF journal, 4 citations are presented (1.2). The contemporary notion for Th1 mediated demyelination in the CNS is confirmed (Dissertation thesis, 1.3, 1.6, 1.5, 1.7, II.4, II.15). The data was published in 3 articles in IF journals, cited 12 times.

***Research-theoretical and applied contributions to the field “Rare diseases in neurology with immune-mediated pathology”***

- The author reports rare cases of immunological conditions (combined demyelination syndrome; onset of Neuromyelitis optica and Lupus Erythematosus, onset of MS with paroxysmal dystonia). The combined demyelination syndrome contributes to the complex characterization of these cases in order to clarify their place in the spectrum of immune-mediated neuropathology – Multiple Sclerosis, Guillen-Barrett syndrome. The onset of two autoimmune diseases with humoral reactivity is confirmatory with respect to the hypothesis of the immune cross reactivity resulting from common determinants in different antigens – cardiolipin, AQP4 antibodies, DNA, etc.

**Monograph**

The applicant submits the monograph *Immunomodulatory Potential of Vitamin D*, ISBN 978-619-168-120-4, published in 2015. The scientific work is 109 pages and is presented in 10 chapters. It describes current scientific information on the etiopathogenesis of the disease, the role of Vitamin D as a risk factor for the occurrence of MS, the involvement of Vitamin-D metabolites in immune dysregulation, as well as first-hand experience from the first clinical observation in Bulgaria. The evaluation shows that the monograph meets the criteria of the LDASRB and is a work which is a practical guide for both neurologists and other doctors with interests in the field.

<b>Index Group</b>	<b>Content</b>	<b>Assoc. Professor (points)</b>	<b>Dr Georgi Svetoslavov Slavov, MD</b>
A	Index 1	50	50
B	Index 2	-	-
C	Sum of indexes 3 and 4	100	100
D	Sum of indexes 5 to 9	200	200.65
E	Sum of indexes 10 to 12	50	420

G	Sum of indexes 13 to end	-	-
---	--------------------------	---	---

### III. Scientific relevance of the presented publications

The scientific papers have been cited 31 times: 26 of the citations have been in scientific editions, referenced and indexed in world renowned database with scientific information (Scopus and Web of Science), 1 in monograph, 4 in non-referenced journals with scientific review.

### IV. Evaluation of educational-methodological and pedagogical activity

Dr G. Slavov has been conducting practical exercises on nervous diseases to medical students since 2012, and since February 2018 in English. Since 2013, he has been delivering lectures on “Immune-mediated Neuropathology” to trainee doctors, general practitioners and nurses. In 2019 he has started teaching nervous diseases course to medical students. He is a member of the Committee for practical examinations of medical students in Bulgarian and English. The average annual academic load of Dr G. Slavov is 481.86 classes (200%), which is twice the norm for non-habilitated teachers. He is author of a chapter in *Neurology - a textbook for students from the Medical College, 2019*.

### Conclusion

Considering the above, I believe that the candidate meets the mandatory and specific conditions and the scientific criteria for the academic position, and I strongly recommend that the honourable jury votes in favour for the awarding of Dr Georgi Sv. Slavov the academic position “Associate Professor” for the needs of the Department of Neurology of MU-Plovdiv.

26.11.2019

Signature

