

REVIEW



regarding a competition on awarding academic position **Associate Professor** in scientific specialty **Neurology**, for the needs of the Department of Neurology, for teaching in Bulgarian and English language at Medical University – Plovdiv, announced in the State Gazette No. 61/ 02.08.2019

Reviewer: **Prof Ivan Petrov, DMSc**

Head of Clinic of Neurology
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By Order No. P-2340/ 28.10.2019 of the Rector of the MU – Plovdiv, I have been appointed as a member of the scientific jury (external to the MU - Plovdiv) in the announced competition.

The only candidate in this competition is Dr Georgi Svetoslavov Slavov, MD, Chief Assistant Professor at the Department of Neurology, Clinic of Nervous Diseases, University Hospital “St. George”.

I. BIOGRAPHICAL DATA, PROFESSIONAL AND ACADEMIC CAREER

Dr Georgi Slavov is born on 27.10.1986 in Parvomay. He completed his secondary education at the French Language High School “Antoine de Saint Exupéry” in Plovdiv with English as a second language and excellent results. Graduates Medicine at Medical University – Plovdiv (Diploma No 007629) in 2011.

In 2012 he is enrolled as doctoral student at the Department of Neurology. In 2016 Dr Slavov defends dissertation work titled *Clinical-laboratory study of serum levels of Vitamin D and cytokines in patients with relapsing-remitting multiple sclerosis*, and is awarded educational and scientific degree “Doctor of Philosophy” (Diploma No 169-DM). From 2013 until now, he works as neurologist at the Clinic of Nervous Diseases at the University Hospital “St. George”, Plovdiv. On 02.09.2015 he becomes Assistant Professor at the Department of Neurology, and on 20.02.2018 he obtains academic position Chief Assistant Professor at the Department of Neurology, Medical University – Plovdiv. In 2017, after passing an exam, Dr Slavov acquires specialty in “nervous diseases”, (Certificate AP No 002546).

Dr Slavov has completed qualification courses: Neuroimmunology – Porto, Portugal, (2013), Multiple Sclerosis at the Bavarian Chamber of Physicians, Munich (2014), Emergency resuscitation procedures for patients with acute stroke (2016), Professional

Qualification Course and EVC Certificate of Evoked Potentials (2019), a course and certificate for highly specialized activity “Evoked potentials”.

Dr G. Slavov participates in two research projects: 1. “Functional cytokine gene polymorphisms and cognitive dysfunction in patients with multiple sclerosis” - project No 02/2014, completed in 2016 – a member of the research team.

2. “Season- and latitude-dependent regulation of the vitamin D – klotho / FGF23 system in healthy persons”, University of Southern Denmark, 2015 – leading researcher.

Dr Georgi Slavov is a member in:

Bulgarian Society of Neurology, Bulgarian Medical Association, Union of Scientists in Bulgaria – Plovdiv.

He is fluent in English and French. Has excellent computer skills. He has no criminal record and has working experience of 8 years, while continuing to work.

II. EVALUATION OF SCIENTIFIC WORKS IN TERMS OF OVERALL ACADEMIC CAREER

The analysis of the quantitative data on Dr Slavov’s scientific production shows that he participates in this competition for "Associate Professor" with a **total of 43 scientific works**.

Of these, **real publications – 30, scientific reports at congresses, symposia, etc., at home and abroad – 13**, all with abstracts printed.

Real publications include: 1 author’s review of dissertation thesis (PhD), 1 independent monograph (published in Bulgaria), 1 Chapter of a collective monograph (abroad), 27 scientific articles of which: 6 related to the dissertation, 11 in referenced journals and 16 in non- referenced collections. Out of 11 publications in referenced journals, 6 are in journals with Thomson Reuters impact factor and 5 in SJR journals.

His works are cited 31 times in world renowned database with scientific information (Scopus and Web of Science), 1 citation in monograph, and 4 in non-referenced reviewed journals.

In 9 of the real publications, Dr Slavov is a sole or first author, in 15 he is a second author, a third and a subsequent author in 12. This testifies to his active and focused research work.

The presented table of the minimum national requirements for awarding academic position “Associate Professor”, shows that 400 points are required, while Dr Slavov has 773.05 points.

I include in Dr Slavov's scientific work also his participation in the writing of 7 chapters of a textbook on Neurology for Bulgarian medical college students.

The information provided from information database shows that Dr Slavov has an **overall impact factor of publications in referenced journals - 9.0, in non-referenced journals - 4.483, or a total of 13.483.**

Qualitative analysis of the scientific publications

The most significant part of Dr Slavov's scientific work is related to MS problems. (Dissertation work, I.5, I.7, I.8, I.9, I.10, I.11, II.2, II.14, etc.). His scientific research in this field is focused on the study of various aspects of pathogenesis, risk and protective factors, clinical characteristics and diagnostics, using clinical and state-of-the-art laboratory methods of investigation.

The more significant original scientific contributions nationwide are:

1. Proven complicity of 25(OH)D in the pathogenesis of MS: immunomodulatory activity on the risk of MS and the severity of neurological deficit in the Bulgarian group of patients. This warrants the study of the therapeutic potential of Vitamin D to modify the disease course, as well as the monitoring of the 25(OH)D serum concentrations in MS patients for treatment and prophylaxis of hypovitaminosis D. The causal relation established by the author, between the neurological deficit severity in relapse, and the serum concentration of 25(OH)D, IL17 and TNF- α , is a reason for monitoring of these values, in order to evaluate the immune inflammatory activity during that period.

2. The relationship established by Dr Slavov, between abnormally low levels of the female sex hormones estradiol/ progesterone in MS patients, the proinflammatory cytokines TNF- α , IFN γ , and the neurological deficit severity, justify further studies on the effect of treatment with preparations of the female sex hormone group. This would improve the control of the immune dysregulation, and slow the disability progress.

3. In the Bulgarian cohort of RRMS patients he proves the participation of genetic determinants -- single nucleotide polymorphisms, in the pathogenesis of the disease: the risk of MS, the age of the first manifestations and the severity of neurological deficit.

4. Interesting is the established lower incidence of the patients with positive CSF oligoclonal profile in the Bulgarian cohort of MS patients, compared to the North European cohort. Oligoclonal bands were not detected in 15%, and in 28% - intrathecal synthesis. There is established relationship between the IgG concentrations in CSF, the deficiency rate, the age of first morbidity and the IgG index (11.6). The data is a premise for further study, which will have practical importance

6. In a number of studies (I.5, I.7, II.4, II.15), a significant decrease in TNF- α , IL10, IFN γ is observed in patients during both periods, and reliably higher concentrations of TGF- β 1 during remission, in patients compared to controls. During the period of clinical improvement, a significant increase in the serum concentrations of TGF- β 1, IL4 and a markedly decreased concentration of IFN γ α are observed, compared to cytokine levels during exacerbation.

7. The established suppressive effect of TGF- β 1 and Copaxone on the production of IL17, significantly more marked for Copaxone, confirms one of the mechanisms of its therapeutic effect – with practical contribution: IFN γ and IL17 are biomarkers for evaluating the effect of TGF- β 1 and Copaxone treatment.

8. The three casuistic cases with immune-mediated neuropathology are also of contributory importance.

I evaluate highly Dr Slavov's scientific achievements introduced in the clinical practice, which is a proof of the efficiency of his research work:

- Monitoring of the 25(OH)D serum levels in patients at the Multiple Sclerosis Research and Treatment Centre, University Hospital "St. George" EAD, Plovdiv.

- Treatment of MS patients with hypovitaminosis D for achievements of the sufficiency level in the Bulgarian cohort within 50-100 nmol/l.

Monitoring of MS patients at the Multiple Sclerosis Research and Treatment Centre for diagnosis of cognitive impairments for the purpose of treatment and rehabilitation.

III. COMPREHENSIVE, QUALITATIVE ASSESSMENT OF THE TEACHING AND METHODOLOGICAL ACTIVITIES

The information presented by Medical University – Plovdiv shows that Dr Slavov is a young and promising neurologist and academician. He conducts practical exercises in neurology with medical and dental students, including in English. He teaches neurology to trainee doctors and residents in neurology and general medicine. Participates in practical exams of medical and dental students. Dr Slavov co-authored a textbook on Neurology (7 chapters) for the training of Bulgarian students in medical college.

CONCLUSION

Dr Georgi Slavov, MD is a young and promising neurologist, scientist and teacher. The contributions of his scientific work are original and applicable. He also has publications in prestigious international journals (with impact factor) that have been cited many times.

Dr Slavov has sufficient, in terms of volume and quality, teaching and academic work in the field of clinical neurology with undergraduate students and trainees.

The quantitative and scientometric criteria for his scientific production under the Law for the development of the academic staff in the Republic of Bulgaria, comply with the accepted criteria for acquiring scientific degrees and occupying academic positions in the Medical University - Plovdiv.

All this gives me reason to give my positive review and to recommend to the honourable members of the scientific jury to vote in favour for the awarding of academic position **Associate Professor** in the scientific specialty "**Neurology**" to Dr Georgi Svetoslavov Slavov, MD.

28.11.2019

Reviewer:

A handwritten signature in blue ink, appearing to be 'Georgi Slavov', written over the 'Reviewer:' label.