

## REVIEW

under a procedure for holding an academic position "ASSOCIATE PROFESSOR" in the professional field 7.1. Medicine in the specialty "Rheumatology", for the needs of the First Department of Internal Medicine, educational sector "Rheumatology", Faculty of Medicine, MU "Prof. Paraskev Stoyanov "- Varna and Clinic of Rheumatology, University Hospital "St. Marina" EAD - Varna, announced in state newspaper, issue 61 / 23.07.2021

There is a single candidate: Dr. Tsvetoslav Antonov Georgiev, PhD, Chief Assistant at the First Department of Internal Medicine – educational sector "Rheumatology" and a specialist in rheumatology at the Clinic of Rheumatology, University Hospital "St. Marina" EAD - Varna.

**Reviewer: Prof. Dr. Nikolay Yordanov Penkov, DSc, Varna**

**Dr. Georgiev** was born on the 15th December 1987 in the city of Burgas. He graduated from high school in 2006 at the First Language School, Varna and Medicine in 2012 at the Medical University, Sofia. His career is as follows: 04.2012/10.2013 - junior specialist in the Executive Agency for Transplantation, 05.2014/05.2018 - specialist in the Clinic of Rheumatology at the University Hospital "St. Ivan Rilski" EAD - Sofia, 01.2019/07.2019 - rheumatology doctor at MHAT "Serdika" EAD - Sofia, 07.2019 - doctor-rheumatology at the Clinic of Rheumatology at UMHAT "St. Marina" - the city of Varna. From 07.2020 until now, he is a chief assistant in rheumatology at the First Department of Internal Medicine at MU - Varna. Dr. Georgiev's total medical experience is a little over 7 years and 5 months, of which approximately 2 years and 7 months as a specialist in rheumatology.

**Specialty acquirement.** He has a recognized specialty in Rheumatology since 2018.

**Postgraduate training and specializations:** musculoskeletal ultrasound - basic, intermediate certificates, conducted by EULAR, BRS, BAMSU; capillaroscopy; imaging and osteodensitometry. There is an additional qualification: review and editing of scientific literature - 2017, 2018, 2019 2020.

**Acquired scientific degree.** After a regular doctorate in 2018, Dr. Georgiev defended his dissertation for obtaining the educational and scientific degree

"DOCTOR" on "Clinical, serological and imaging studies in patients with gonarthrosis treated with various therapeutic agents."

**Membership in scientific organizations and editorial boards:** Member of the Bulgarian Medical Union; Bulgarian Society of Rheumatology; Bulgarian Society of Osteoporosis and Osteochondrosis; of an EMEUNET subcommittee to the European Alliance of Rheumatology Associations. Participates in the editorial boards of specialized scientific journals: Rheumatology (Bulgaria), Rheumatology international, World Journal of Clinical Cases and SN Comprehensive Clinical Medicine.

Dr. Georgiev is fluent in two foreign languages: English and German.

**Research activity.** In the competition for the academic position "ASSOCIATE PROFESSOR IN RHEUMATOLOGY", Dr. Georgiev participates with a total of 54 scientific papers distributed as follows:

1. **Dissertation** for the acquisition of educational and scientific degree "DOCTOR" - 1 50.00 p.
2. **Habilitation work** - monograph - 1 100.00 p.
3. **Publications in scientific journals**, referenced and indexed in world databases - 9 240.00 p.
4. **Publications in non-referenced journals** with scientific review or in collective volumes - 4 49.50 p.
5. **Full-text** publications in scientific journals and collections outside the minimum requirements for borrowing of AD "Associate Professor" - 10 214.00 p.
6. **Publications** presented upon acquisition of educational and scientific degree "Doctor" - 4 57.45 p.
7. **Participation in national and international** scientific events – 28 (from which 3 are included in the publications within the minimal requirements in p. 3)

The scientific publications in the section covering the minimum scientometric requirements for acquiring the academic position of "Associate Professor" bring the candidate a total of 439.5 points. This means that they significantly exceed the required minimum. If the works outside the required minimum and those that were presented in defense of his dissertation are added to them, the evaluation reaches the impressive figure of 710.95 points. The works of Dr. Georgiev published in journals with IF are equal to 17.468.

Of the total of 54 scientific papers presented in the competition, in 6 Dr. Georgiev is the sole author, in 28 - first, in 10 - second, and in the remaining 10 - third or subsequent. The data show that in the scientific production of the competition for academic position "ASSOCIATE PROFESSOR" Dr. Georgiev has a decisive role.

**The scientific fields in which Dr. Georgiev has worked and his scientific contributions** are the following:

**1. Osteoarthritis.** This is the main direction in the scientific research of Dr. Georgiev and his dissertation is dedicated to it. Clinical parameters and biomarkers determining the functional deficiency in knee osteoarthritis were analyzed. The modifiable risk factors for the disease are classified and a protocol for their intervention is proposed. The clinical efficacy of two regimens for intra-articular cross-linked high molecular weight hyaluronic acid was compared. The relationship between osteoarthritis and polycystic ovaries in women has been tested. A scientific novelty is the study of the levels of early biomarker for cartilage degeneration in women with polycystic ovaries.

**2. Biomarkers.** A novelty is the study by magnetic resonance imaging of the relationship between the levels of MMP-3 and the progression of cartilage degeneration in knee osteoarthritis. A scientific novelty is the determination of the assessment of the momentary loss of cartilage in young women with hyperandrogenism by magnetic resonance imaging. For the first time in Bulgaria, the role of the biomarkers MMP-3, COMP and VEGF was assessed in patients with psoriatic arthritis. The relationship between magnetic resonance imaging and serum levels of cartilage oligomeric matrix protein in patients with knee osteoarthritis was examined.

**3. Imaging diagnostics of the musculoskeletal system.** The influence of structural changes on the intensity of pain in patients with knee osteoarthritis was studied and analyzed by radiography and ultrasound. Changes in the muscles in the lumbar region in patients with axial spondylarthritis were assessed by magnetic resonance imaging. A comparative study of the area of the paravertebral muscles in patients with axial spondylarthritis and those with chronic low back pain was performed.

**4. Rheumatic diseases and Covid-19.** For the first time in our country, the prevalence of rheumatic manifestations was analyzed and described in a cohort of patients with COVID-19. Factors that could affect the safety and efficacy of SARS-CoV-2 vaccines in patients with autoimmune inflammatory diseases have been analyzed.

**5. Inflammatory joint diseases.** The publication activity of the Bulgarian authors in the field of inflammatory joint diseases has been studied. A cost-effectiveness analysis of treatment in patients with rheumatoid arthritis was performed.

**Citations.** The scientific works of Dr. Georgiev have been cited many times (about 200 times) in various scientific journals. As citations, covering the minimum scientometric requirements for acquiring the academic position "ASSOCIATE PROFESSOR", 10 citations were used, all of which are in scientific journals, referenced and indexed in relevant databases with scientific information.

**Reviews.** The candidate is the author of numerous peer reviews in 29 scientific journals and has been repeatedly awarded as a good reviewer.

Participation in research projects. Dr. Georgiev has participated in two research projects at MU-Sofia: "Young Researcher" 2015 on "Study of serum levels of COMP, COLL2-1 and MMP as markers of activity in patients with gonarthrosis" and "GRANT 2016 on "Evaluation of the effectiveness of intra-articular administration of platelet-rich autologous plasma in patients with gonarthrosis"

**Teaching activity.** According to Certificate № 46 / 17.06.2019 in the period 2013 - 2018 Dr. Georgiev, in his capacity as a PhD student, has participated in the training of fifth year students at the Faculty of Medicine at MU-Sofia. The second certificate from MU-Varna 099-2387 / 26.08.2021 shows that the teaching experience of Dr. Georgiev as a chief assistant is 1 year and 1 month and has teaching load during the academic year 2020/2021 of 152 academic hours and as part-time teacher in 2019/2020 – 140 academic hours.

**CONCLUSION.** Dr. Georgiev is a very well-trained specialist in rheumatology with a total work experience of 7 years and 5 months, of which 2 years and 7 months as a specialist in rheumatology. He has the necessary qualification and routinely uses in his daily work almost all non-invasive and invasive rheumatological methods. He is an ultrasound specialist with excellent theoretical training and significant practical experience. Much of his daily medical work is directly related to scientific research in patients with osteoarthritis. This makes him a doctor with special training and practical experience in patients with this particularly common and disabling arthropathy, requiring special theoretical training and practical experience. In the current competition the candidate participates with a total of 54 scientific publications, which have points significantly exceeding the mandatory minimum for acquiring an academic position of "Associate Professor". Dr. Georgiev's publications

in scientific with an impact factor bring him an equal total of 17.468. He is a member of the most popular Bulgarian and international scientific societies in the specialty of rheumatology. He participates in the editorial boards of several specialized scientific journals in rheumatology. Dr. Georgiev has participated in two research projects at MU-Sofia. He is fluent in written and spoken German and English. His study experience for the last two school years is sufficient in volume. My personal impressions of Dr. Georgiev as a doctor, lecturer and researcher are excellent. In my opinion, he has great potential that has not yet been fully revealed as a medical doctor, lecturer and researcher. I believe that he can lead a research team and fully meet the requirements for holding the academic position of "ASSOCIATE PROFESSOR" in rheumatology. That is why I will vote in favor with a positive vote, and I recommend that the other members of the Scientific Jury do the same.

20.10.2021 r.  
Varna

Reviewer:.....  
(Prof. Dr. Nikolay Penkov, DSc)