

To the Chairman of the Scientific Jury,  
designated by the Rector  
of the Medical University  
Prof. Dr. Paraskev Stoyanov Varna

## Review

by Assoc. Prof. Dr. Atanas Angelov Atanasov, PhD  
First Department of Internal Medicine  
at the Medical University - Varna

Member of the scientific jury for the competition (SG No. 8/28.01.2020)  
for acquiring the academic position "**Associate Professor**" in the field of higher  
education 7. "Health and Sports", professional field 7.1. "Medicine" and scientific  
specialty "**Rheumatology**" for the needs of the Faculty of Medicine, First  
Department of Internal Medicine and Clinic of Rheumatology at the University  
Hospital "St. Marina "Varna

By order of the Rector of MU Varna R-109-166/03.06.2020 I was elected a  
member of the Scientific jury, and by protocol N: 1 of the first meeting of the NJ I  
was elected to prepare an opinion on the procedure for acquiring an academic  
position "Associate Professor" for the needs of the Faculty of Medicine, First  
Department of Internal Medicine and the Clinic of Rheumatology at the University  
Hospital "St. Marina "Varna.

The procedure for announcing the competition is in accordance with the law  
requirements, no procedural irregularities have been identified. Documents for the  
competition have been submitted by one candidate - **Dr. Tanya Kirilova  
Shivacheva, PhD.**

### 1. Brief biographical data about the candidate

Dr. Tanya Shivacheva graduated from the Medical University of Sofia in 1982.  
During the period 1982-1985 she worked as a district therapist, and since 1985 she  
has been a doctor at the University Hospital "St. Marina". Since 1989 Dr.  
Shivacheva has been an assistant in the Department of Internal Medicine at the  
Medical University in Varna. In 1989 he acquired the specialty "Internal  
Medicine". Dr. Tanya Shivacheva is the first assistant in the Department of Internal  
Medicine, who in 1997 acquired the specialty "Rheumatology" after separating  
from the existing specialty "Rheumocardiology". For many years, Dr. Shivacheva

is the only assistant who teaches in the specialty "Rheumatology", in the training of internal medicine, students, interns and professionals.

Dr. Tanya Shivacheva has many additional professional qualifications, some of which should be noted:

- Ultrasound diagnostics of the musculoskeletal system
- Pedagogical bases of academic teaching
- Work with the electronic platform Blackboard Learn
- Methodology of research
- Interactive teaching methods

In 2019, Dr. Tanya Shivacheva acquired an educational and *scientific degree "Doctor"* with the topic of the dissertation: *"Study of the clinical activity of rheumatoid arthritis in patients undergoing treatment with biological agents"*.

## **2. Research activity of the candidate - evaluation of the quantitative and qualitative indicators**

Dr. Tanya Shivacheva has submitted for review the following scientific papers:

1. *Monograph*: Tanya Shivacheva. Rheumatoid arthritis patient - present and future. ISBN 978-619-221-231-5. 185 pages.
2. *Publications in full text in scientific journals, referenced and indexed in a world database with scientific information* - 10 issues.
3. *Full text publications in scientific journals with scientific review* - 4 issues.
4. *Participation in national congresses and conferences* - 30 pieces.
5. *Participation in international congresses and conferences* - 17 pieces.

Dr. Shivacheva is a only author of 5 scientific articles. She is the first author in 16 (27%) publications and the second author in 11 (18%). In 55% of the publications Dr. Shivacheva is the third or next author.

**Citation:** There are 5 citations of the scientific works of Dr. Tanya Shivacheva in scientific journals, referenced and indexed in a global database of scientific information.

Dr. Shivacheva was a reviewer in the international journal Rheumatology International Journal, IF 2,025.

## **3. Scientific fields in which the candidate has mainly worked and where the scientific publications are concentrated:**

- Rheumatoid arthritis
- Non-steroidal anti-inflammatory drugs
- Reactive arthritis

- Slow-acting disease-modifying agents and chondroprotectors in inflammatory and degenerative joint diseases
- Osteoporosis
- Autoimmune vascular connective diseases

#### **4. Scientific and applied contributions**

The main part of Dr. Shivacheva's research is in the field of rheumatoid arthritis (RA). In her research, she explores various aspects of the disease:

- significance of comorbidity for the course and prognosis of RA
- cardiovascular diseases and general cardiovascular risk in people with RA
- application of different index scales for assessment of the activity of RA and the effectiveness of biological agents
- therapeutic efficacy of biological and synthetic slow-acting disease-modifying drugs
- therapeutic efficacy of corticosteroid treatment in patients with RA on biological therapy
- therapeutic efficacy of apheresis methods in the complex treatment of RA
- application of new immunological markers in RA

As the main contribution of Dr. Shivacheva in rheumatology science and practice it should be noted that for the first time in Bulgaria the picture of RA activity on the background of treatment with biological agents in the conditions of real clinical practice is described and considered in dynamics. The factors related to the nature of RA and its treatment, which influence the medium-term prognosis, are analyzed. The profile of the patient with RA on treatment with biological agents is very precisely described, with a poor prognosis for survival in the next 10 years. An analysis of comorbidity, traditional risk factors for cardiovascular disease in combination with factors arising from the inflammatory nature of RA and its treatment was made. An easy-to-use algorithm for individual care in patients with RA has been developed, which should be followed both in the presence and in the absence of concomitant cardiovascular disease. Adherence to it can be expected to lead to: slowing the progression of RA; suppression of accelerated early atherosclerosis and respectively reduction of morbidity and mortality from cardiovascular diseases. According to Dr. Shivacheva, the multimorbid approach in patients with RA is more cost-effective. It can reduce the cost-effectiveness of expensive biologic therapy and increase clinical benefits for patients.

Another contribution of Dr. Shivacheva is the creation of a register of patients with RA who are treated with biological disease-altering agents on the territory of the Clinic of Rheumatology at the University Hospital "St. Marina". Significant regularities have been established in the treatment with these drugs in the real

clinical conditions: delay in treatment relative to diagnosis; long-term use of corticosteroids; combination treatment with methotrexate.

An important place in the research work of Dr. Shivacheva is occupied by the evaluation of the effectiveness of biological and synthetic slow-acting disease-changing drugs. The proportion of patients with combination therapy with methotrexate has been established. Predictors of treatment effectiveness were sought. Its safety and tolerability have been analyzed. In real clinical practice, too many patients (> 50%) of those treated with biologics continue to receive corticosteroids and/or nonsteroidal anti-inflammatory drugs. Dr. Shivacheva proves the presence of a more unfavorable cardiovascular risk profile in people with daily corticosteroids use. This compromises the benefits of biologic therapy and increases costs.

Other new immunological markers used in the diagnostic process in RA are the subject of other publications. Antiperinuclear factor and antikeratin antibodies are highly sensitive and specific markers of RA and are an alternative to the rheumatoid factor test.

Of interest are studies on the treatment and prognosis of reactive arthritis. The three-year prognosis was analyzed depending on the clinical features, timeliness and type of treatment. Prognosis has been shown to be weakly affected by antibiotic and immunomodulator treatment. A prognostic model has been proposed in patients with reactive arthritis. The effectiveness of various drugs such as Ofloxacin and Sulfasalazine has been studied.

In several publications, Dr. Shivacheva studies the frequency and type of myocardial involvement in autoimmune vascular diseases such as lupus erythematosus and systemic scleroderma. A diagnostic screening algorithm for pulmonary arterial hypertension in individuals with systemic scleroderma has been proposed.

#### **5. Educational-teaching activity**

Dr. Tanya Shivacheva conducts training in internal medicine with medical students training in Bulgarian language. Its workload for the last 5 years is:

2014/2015 - 246 hours

2015/2016 - 252 hours

2016/2017 - 240 hours

2017/2018 - 258 hours

2018/2019 - 250 hours

Dr. Shivacheva participates in the examination commissions in Internal Medicine for IV-th year Medical students. Trains trainee doctors during their state internship in Internal Medicine. Participates in the training of specializing doctors in the specialties "Rheumatology" and "Internal Medicine" and is deputy chairman of the examination commission for current control during the specialization. Dr. Shivacheva is the creator of the section "Rheumatology" of the exam tests in Internal Medicine for students of Medicine IV and VI course.

**In conclusion**, Dr. Tanya Shivacheva, PhD is a built rheumatologist, distinguished by his very good internal medicine training. In her professional development Dr. Shivacheva has gained significant practical experience in the field of cardiology, including emergency. This is probably one of the reasons to look for common ground between the two specialties Rheumatology and Cardiology in her most important scientific developments - those in the field of rheumatoid arthritis.

Scientific production and teaching workload of Tanya Shivacheva, PhD fully meet the requirements of PRAS and the Regulations on the terms and conditions for obtaining scientific degrees and holding academic positions at MU Varna. That gives me a reason confident to propose to the esteemed scientific jury to vote positively for the award of the academic position "**Associate Professor**" to **Dr. Tanya Shivacheva** in the scientific specialty "**Rheumatology**" for the needs of the First Department of Internal Medicine at the Faculty of Medicine at MU Varna.

29.07. 2020  
Varna

Assoc. Prof. Dr. Atanas Angelov, PhD

