

## **REVIEW**

from

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**Regarding:** Competition for the academic position "Associate Professor " in the specialty "Orthopaedics and Traumatology", Professional direction 7.1 Medicine, in the field of higher education 7. Healthcare and sports at the Faculty of Medicine, Department of Orthopaedics and Traumatology", Medical University "Prof. Dr. Paraskev Stoyanov"-Varna, according to an announcement in the State Gazette, Issue 54 from 23.06.2023 with candidate

### **Dr. Svetoslav Lachezarov Dobrilov, PhD**

By Order R-109-371/21.08.2023 of the Rector of the Medical University of Varna and by a decision of the Faculty Council (Protocol from 31.07.2023), I was selected to participate in the Scientific Jury and according to a Decision of the Scientific Jury with Protocol №1/31.07.2023 I was determined to prepare a **review** by a procedure for the acquisition of the academic position "Associate Professor" in the specialty "Orthopaedics and Traumatology", Professional direction 7.1 Medicine, in the field of higher education 7. Healthcare and sports at the Faculty of Medicine, Department of orthopaedics and traumatology, Medical University "Prof. Dr. Paraskev Stoyanov"-Varna.

For participation in the competition only one candidate has submitted his documents - Dr. Svetoslav Lachezarov Dobrilov. The candidate has presented all the necessary documents for the competition according to the requirements of the Act for the Development of the Academic Staff and the Regulations of Medical University of Varna for its application.

Dr. Svetoslav Dobrilov was born in 1980 in Varna. He graduated from the specialty "Medicine" in 2004 at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna. At the beginning of 2005, he enrolled in the specialization of orthopedics and traumatology at the MHAT "St. Anna" - Varna; since September 2005, after a successful competition, he has been an assistant professor at the Department of Orthopedics and Traumatology at the Medical University of Varna. He acquired a specialty in orthopaedics and traumatology in 2010. In 2018 he defended a PhD degree at the Department of Orthopedics and Traumatology, specialty "Orthopedics and Traumatology" with a thesis entitled "Osteoplastic Reconstruction in Anterior Shoulder Instability with Concomitant Glenoid Bone Loss". Since 2019 till the present day he has been chief assistant professor at the Department. Since 2012 he has been working as an orthopedic surgeon at the University Hospital "St. Marina" - Varna .

The candidate regularly participates in national meetings and congresses of the Bulgarian Orthopedic and Traumatological Association and in a number of international congresses of the European (ESSKA) and World (ISAKOS) associations. In 2009 he completed a 6-month fellowship at "Hadassah" University Hospital in Jerusalem, at the Clinic of Orthopedics and Traumatology, under the supervision of Prof. Libergall and Prof. Rami Moshaviv. For the period from 2011 until now, the candidate has conducted numerous qualification enhancing trainings such as AO Basic Course, AO Advanced Course (Bulgaria), ESSKA Advanced shoulder arthroscopy course in York and Watford (UK), International shoulder course (Berlin), Haemophilia Course in Milan and Sorrento (Italy) and Budapest (Hungary); Reverse shoulder arthroplasty course in Paris (France); Revision knee arthroplasty course in Tübingen (Germany) and Zagreb (Croatia).

Dr. Svetoslav Dobrilov holds certificates for highly specialized procedures in joint arthroplasty and arthroscopy; qualification in healthcare management, etc. He is a member of national (BOTA, BAAST) and international (ESSKA, EFFORT) orthopedic associations.

Dr. Dobrilov has more than 17 years of teaching experience and participates in the teaching of the disciplines "Orthopedics and Traumatology" to the students in the specialty of medicine in the Bulgarian and English language programmes, and "Orthopedics and Traumatology with Orthotics and Prosthetics" to the students in the specialty of kinesiotherapy at the Medical University of Varna.

The annual teaching workload of the candidate fulfills and exceeds the requirements for teaching employment adopted at the University.

The submitted works for participation in the competition, a total of 30 works, reflect the scientific research activity in the period 2012-2023.

**Distribution of the scientific works by type:**

Habilitation work – 1;

Dissertation work - 1;

Publications in scientific journals and proceedings - 28 .

**Distribution of the scientific works by language of publication:**

Publications in Bulgarian language - 21;

Publications in a foreign language (English ) - 7.

**Distribution of the scientific works by authorship:**

As an independent author -1;

Co-author - 27, of which:

*first* author - in 6 publications;

*second* author - in 10 publications;

*third* author - in 6 publications;

*fourth* author - in 5 publications.

## **Distribution of the works by scientific fields:**

### **1. Health and sports**

The main guidelines in the candidate's research work are aimed at the pathology of the large joints of the musculoskeletal system - with an emphasis on the shoulder, hip and knee joints; sports traumatology and arthroscopic surgery; traumatology of the shoulder joint and the multidisciplinary approach in the treatment of patients with musculoskeletal pathology.

The author's research interests in the shoulder joint are associated with bone loss in shoulder instability; its diagnosis and methods for its precise calculation; the therapeutic possibilities of different techniques for bone deficits correction; diagnosis and treatment of traumatic and degenerative conditions affecting the shoulder joint and analysis of the existing therapeutic algorithms; the possibilities of shoulder arthroplasty in the treatment of polyfragmentary fractures of the proximal humerus; analysis and evaluation of the possibilities of the preoperative computer planning for shoulder arthroplasty; clinical and CT analysis of the postoperative results, e.g. position of the prosthetic components and their relationship with the clinical results; multi-modal approach in the postoperative follow-up of patients with shoulder arthroplasty.

In the field of primary hip arthroplasty, the candidate is involved in the analysis of the use of individual femoral stems and dual-mobility acetabular capsules (DMC). In the case of revision hip arthroplasty, he emphasizes again the possibilities of DMC and the long hydroxyapatite femoral stems, in the treatment of the most common complications in revision arthroplasty. In the area of the knee arthroplasty, the candidate works in the sphere of periprosthetic infections and treatment algorithms. Collateral topics such as management of blood loss during arthroplasty and analysis of the infection risk during autologous blood transfusion are also covered.

The modern mini-invasive/arthroscopic approach in the treatment of the most common pathology in the field of sports traumatology is the candidate's other field of interest. Common diseases such as calcifying tendinitis of the shoulder, upper extremity tendon ruptures; the treatment of insertional tendinopathies of both upper and lower limbs. Attention is also paid to the mini-invasive approach in the treatment of frequent muscle-tendon injuries of the lower limb.

Shoulder arthroplasty with an emphasis on polyfragmentary fractures is still another field of the candidate's scientific work. The work is focused on the possibilities of reverse shoulder arthroplasty, the position of the components and their relationship with postoperative results and complications. A prerequisite for a good clinical result is not only the correct surgical technique and positioning of the implants, but also an adequate, targeted and active, multidisciplinary approach in the postoperative period with kinesitherapy assistance.

The overall scientific production is closely related and focused on the collaboration between orthopedists-traumatologists and kinesitherapists in the treatment of the above mentioned pathology of musculoskeletal system and the possibilities and effectiveness of interdisciplinary teams in medical practice. The analysis of the results shows the effectiveness of the treatment process with proper collaboration with the kinesitherapists.

### **Main fields of the scientific works:**

1. Shoulder instability and coexisting bone defects;
2. Primary and revision arthroplasty of knee and hip joint;
3. Arthroscopic and mini-invasive surgery in sports traumatology;
4. Shoulder arthroplasty;
5. Collaboration and interdisciplinary approach in orthopedics and traumatology.

### **Contributions related to the main fields of the scientific works:**

***FIELD 1: (A 1; B3; Publications for PhD degree G8.1, G8.2, G8.3 and G8.4 from the academic reference)***

The significance of glenoid bone loss in anterior shoulder instability is defined. A diagnostic algorithm for its assessment and a methodology for calculating glenoid bone loss are defined. The use of the ISIS score when choosing an operative technique is extremely important and is emphasized in the above publications. The popular technique of coracoid transfer provides an option for the correction of varying degrees of bone loss. The analysis of the results based on

computed tomography proves the reliability of the technique and the constancy of the results, regardless of the degree of resorption of the bone augment. The indications for the application of coracoid transfer are expanded even in borderline bone loss with a moderate number of episodes of instability. This allows for covering a larger number of patients with shoulder instability and greater clinical relevance, respectively.

***FIELD 2 :( D7.2, D8.1, D8.2, D8.5, D8.8, D8.15; full-text publication beyond minimum requirements #1,)***

A thorough analysis is performed of the possibilities of dual-mobility acetabular components in the treatment of femoral neck fractures in adult patients. Their advantage over hemiarthroplasty in terms of patient mobility and over conventional bipolar arthroplasty with femoral heads with diameters of 28mm, 32mm, and 36mm in terms of dislocation risk is significant. The analysis of these cohorts of patients allows their widespread use in medical practice in this specific group of patients. The reliability of this configuration makes its use in revision arthroplasty almost mandatory in view of the instability after multiple operative interventions for total hip arthroplasty. The use of individual femoral stems in patients with extra-articular deformities of the hip allows for the accurate restoration of the kinematics of the hip joint, especially in young patients with previous hip pathology. Analysis of the use of tranexamic acid to control blood loss in the knee/hip arthroplasty allows for expanding the indications for its use, not only in joint replacement and extensive bone surgery, but also in other areas of surgery such as maxillofacial, aesthetic and reconstructive surgery, neurosurgery, etc. Another direction in the field of knee arthroplasty is the analysis and typization of the functional phenotypes of the knee joint, especially in young patients with osteoarthritis .

***FIELD 3 :( D8. 3, D8.4, D8.6, D8.7, D8.9, D8.10, D8.11, D8.12, D8.13, D8.14, D8.16, Publications for the administrative position "Chief Assistant Professor" No. 1, )***

The arthroscopic treatment of diseases in the area of the shoulder joint as a calcifying tendinitis and degenerative rotator cuff tears is the gold standard in modern clinical practice. This allows both for the accurate localization of the pathological process and at the same time a minimal surgical "imprint" on the patient. The advantages of this technique have been proven in the clinical practice both in young patients with traumatic conditions and in adults with degenerative changes.

Mini-invasive techniques are demonstrated for the most common traumatic conditions both in professional athletes and in people with high physical activity: anterior cruciate ligament reconstruction, tendon and muscle ruptures. Rare cases in clinical practice have also been published such as osteochondroma of the scapula and skeletal muscle echinococcosis.

***FIELD 4 : ( G7. 4 )***

Shoulder arthroplasty is gradually gaining popularity in the clinical practice for the treatment of polyfragmentary fractures of the proximal humerus in patients of various ages. The constancy of postoperative results makes this technique attractive and increasingly sought. The detailed analysis, pre- and post-operative, allows for the setting of accurate indications and correct implementation of the operative technique. This, in turn, is a prerequisite for avoiding the most common complications after this intervention - scapular notching, acromion fracture, loosening, stiffness, etc.

***FIELD 5. (G7.1, G7.3, G8.17, publications for the administrative position "Chief Assistant Professor" No. 2, )***

The multidisciplinary approach in the treatment of any pathology is of utmost importance in order to establish the correct diagnosis and choose an appropriate treatment algorithm. The collaboration between orthopedists and kinesiologists in modern practice is absolutely mandatory for the achievement of an optimal functional result from the treatment of a specific disease. The analysis of the results shows high satisfaction in patients treated by such teams, compared to a single-person therapeutic approach. The adoption of this type of treatment approach and integrated care in clinical practice is extremely important, and is a prerequisite for excellent functional results not only in the field of orthopedics and traumatology, but also in public health care as a whole.

In conclusion, the fulfillment of minimum national requirements specified in the Regulations for the application of the Act for the Development of the Academic Staff in the Republic Bulgaria and the Regulations of the Medical University - Varna, the established contributions of the scientific activity of the candidate and his teaching and clinical experience,

give me all reasons for a positive review and I recommend to the honorable members on the Scientific Jury to cast their positive vote and propose to the Rector of the Medical University of Varna Dr. Svetoslav Lachezarov Dobrilov, PhD to occupy the academic position "Associate Professor" in the scientific specialty "Orthopedics and Traumatology", Professional direction 7.1 Medicine, in the field of higher education 7. Healthcare and sports at the Faculty of Medicine, for the needs of the Department of Orthopedics and Traumatology at Medical University "Prof. Dr. Paraskev Stoyanov" - Varna.

14.09.2023

Varna

A handwritten signature in blue ink, appearing to be 'Svetoslav Lachezarov Dobrilov', written in a cursive style.