



OPINION

FROM PROF. RUSKA PASKALEVA, PHD

Trakia University - Stara Zagora

Appointed as member of academic jury with Order № 294/ 06.02.2023

of the Rector of Trakia University – Stara Zagora

Subject: Competition for academic rank “Associate Professor” in Kinesitherapy, higher education field 7. Health Care and Sport; professional field 7.4. Public Health, for the needs of the „Rehabilitation” specialty, Medical College, Trakia University – Stara Zagora, announced in State Gazette 99/13.12.2022

1. General description of the procedure

The procedure related to the announced competition for conferral of the academic rank “Associate Professor” was correctly followed. Within the legal deadline, the only applicant having submitted documents was Chief Assistant Professor Ana Todorova Nikolova, PhD. The materials presented by the applicant contain all necessary information for the evaluation and are in line with the Statute for Development of Academic Staff at the Trakia University – Stara Zagora.

2. Applicant biography and professional career

Chief Assistant Professor Ana Todorova Nikolova was born in 1977 in Sofia. In 2000 she has obtained a Bachelor degree from the National Sports Academy “Vasil Levski”, Kinesitherapy major; and in 2012: a Master degree in Public Health and Health Management from the Medical University – Sofia.

In 2018 she was conferred the PhD educational and scientific degree in the scientific specialty “Kinesitherapy” after defense of a dissertation entitled: “Post-operative kinesitherapy following elbow fractures“ from the South-West University – Blagoevgrad.

In the period 2001-2009 the applicant has worked as kinesitherapist in the Specialized Obstetrics & Gynecology Hospital “Maichin Dom” – Sofia, in “Tsaritsa Ioanna” – Sofia, Military Medical Hospital Kuwait - Sofia. From 2017 to present, works as physiotherapist in “Fiziopilates LTD“.

The teaching activities of Chief Assistant Professor Ana Todorova Nikolova started in 2014-2017 as part-time instructor in the National Sports Academy “Vasil Levski”. From 2021 to present, she is Chief Assistant Professor of Kinesitherapy in the Medical College, Trakia University – Stara Zagora. In 2023, again, she is part-time instructor in the National Sports Academy “Vasil Levski”, Department of Kinesitherapy.

3. Teaching and learning activities

Chief Assistant Professor Ana Todorova Nikolova participates actively in giving lectures and in practical training of students from the Rehabilitation major at the Medical College – Stara Zagora and students from the Kinesitherapy major at the National Sports academy “Vasil Levski” – Sofia. The academic load of the applicant is entirely compliant with the norms for a non-habilitated instructor approved at the Trakia University – Stara Zagora.

She participates in 15 qualification courses related to her professional development /PNF in Practice Course, Mulligan Conception Course 2005, Myofascial Syndrome Treatment/ and courses specialised in orthopaedic kinesitherapy.

Chief Assistant Professor Nikolova is fluent in both written and spoken German. She has good communication skills for work with students and computer skills for work with Microsoft Office - Word, Power Point.

4. Research activities

In this competition, Chief Assistant Professor Ana Todorova Nikolova participates with a total of 11 research works /3 in peer-reviewed and 8 in non peer-

reviewed editions/, 1 monograph and 1 book written on the basis of the defended PhD thesis. Out of all presented publications, the applicant is first authors of 4 and second, third and subsequent author – of 7.

The applicant provides proofs of 11 citations of her works /2 in international and 9 in national editions/.

The presented monograph entitled „*Kinesitherapy of femoroacetabular impingements*“ describes thoroughly and in details the concept of femoroacetabular impingement, a problem that is yet not sufficiently known in Bulgaria. This also applies to the kinesitherapeutic approach in both the postoperative period and early symptoms' treatment. The performed studies evidenced clearly the increasing trend in the number of cases diagnosed with femoroacetabular impingement, which seriously affects the quality of life of patients.

4.1. Subjects and contributions of research works

The realisation of applicant's scientific interests are reflected in a purposeful and sustainable scientific development and publication activity. The subjects of research works of **Chief Assistant Professor Ana Todorova Nikolova** correspond to the professional field of the announced competition:

- ***Functional recovery of elbow joint after intraarticular fractures, complications and post-traumatic elbow joint recovery / 11, 8, 5/.***

A protective mechanism of soft tissue nature as response to the application of passive-aggressive manual manipulations was established. The reliability of elastic band resistance exercises for prevention of trends towards contracture following complex RSOM interventions was proved. Data about increased risk for development of ectopic ossifications in the elbow joint region due to passive stretching and aggressive passive movements were provided.

- ***The role of kinesitherapy in children with haemophilia / 7 /.***

The effect of special physical exercises and some sport elements for reduction of pain, increase in range of motion and muscle strength was demonstrated. Improved tissue trophic effects, microcirculation and beneficial influence of kinesitherapy on biomechanical joint load were reported.

- ***The effects of “online” learning / 2 /.***

The risk of prolonged stay in front of monitors and its negative impact on the physical, mental, emotional and social health of young people was confirmed. The serious disturbances in health, economic, social and educational aspects of this phenomenon was established.

- ***Application of synthetic calcium phosphate substitutes in the treatment of bone defects of different genesis / 9 /.***

Original data on beta tricalcium phosphate and calcium-deficient hydroxyapatite were obtained, an enhanced biodegradation rate and higher percentage of bone regeneration were found out in comparison to nanocrystalline hydroxyapatite and biphasic calcium phosphate.

- ***Epidemiology of femoroacetabular impingement / 6 /.***

A comparative historical analysis and the scientifically justified role of femoroacetabular impingement in the initial development of coxarthrosis were outlined. The relationship between the development of the femoroacetabular impingement in professional athletes practicing some types of sports: running, jumping, martial arts, gymnastics, ice hockey, horse riding was shown.

- ***Innovative kinesitherapeutical protocol in the conservative treatment of femoroacetabular impingement / 4 /.***

A detailed analysis of affected muscle groups and components around the coxofemoral joints in femoroacetabular impingement was made, with description of impaired joint biomechanics, postural and locomotor changes, hypotrophy of

extensor and adductor muscles. The relationships between the deep and superficial myofascial systems and their disequilibrium in femoroacetabular impingement were discussed in detail.

- *Local and locoregional flaps, non-free grafts and innovative methods for plastic reconstruction / 10 /.*

Development of introduction of innovative perforator island flaps (including its predecessor – the Bezier flap) and their practical application.

- *Comparative analysis of available literature, electronic editions and research forums with regard to post-immobilisation changes in the musculoskeletal system / 1 /.*

A systematic literature overview describing the changes occurring in synovial fluid, ligaments and their insertions, bones, tendons, articular cartilage and muscles after immobilisation was done.

The applicant's scientific production in these fields is both original and confirmative and the results are applied in the kinesitherapeutical practice and training.

Conclusion

The documents presented by Chief Assistant Professor Ana Todorova Nikolova as applicant in the competition for the academic rank "Associate Professor" are entirely in line, both as amount and content, with the requirements of the Law for Development of the Academic Staff in the Republic of Bulgaria and the Statute for Development of the Academic Staff of the Trakia University – Stara Zagora. The evaluation of the scientific production of the applicant shows compliance with science metric requirements /a score of 442 points vs the

minimum required 400 points/; contributions of presented research works; results with scientific and practical value and teaching load.

I would also add my personal impressions of Ana Nikolova - a responsible, loyal, approachable colleague and a competent, creative instructor, respected by students.

I give my POSITIVE EVALUATION and recommend the honorable academic jury members to vote positively for conferral of the academic rank “Associate Professor” in the scientific specialty “Kinesitherapy”, professional field 7.4. Public Health, higher education field 7. Health Care and Sport, to Chief Assistant Professor Ana Todorova Nikolova for the needs of the „Rehabilitation” specialty, Medical College, Trakia University – Stara Zagora.

6 March 2023

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/ Prof. Ruska Vasileva Paskaleva, PhD /