

REVIEW

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Subject: Competition for holding the academic position of „Associate Professor“ announced in State Gazette issue 62/06.08.2019 in the field of higher education 7. *Health and sports*, professional field 7.1. *Medicine*, in scientific specialty „*Obstetrics and gynecology*“ at the Faculty of *Medicine*, Department of *Obstetrics and gynecology* and Maternity ward at the Multipurpose hospital for active treatment “St. Anna – Varna“ AD, Varna.

According to a decision of the Faculty Board of the Faculty of Medicine, Minutes No. 10 of 10/7/2019 and Order No. R-109-317/07.10.2019 of the Rector of the Medical University - Varna, I have been appointed a member of the Scientific Jury and to prepare a review regarding the competition for holding academic position of Associate Professor at the Medical University of Varna and the MPHAT St. Anna-Varna AD, Varna, for the scientific specialty of Obstetrics and Gynecology.

The competition has been announced in State Gazette issue 62/06.08.2019 and is in compliance with the Law for the development of the academic staff in the Republic of Bulgaria and the Regulations for its application at the Medical University - Varna. On the basis of the above legal documents, all procedural requirements for the announcement of the competition, the deadline for submission of documents and the selection of the Scientific Jury have been complied with.

For participation in the competition is admitted Ch. Asst. Dr. Nikolay Dimitrov Kolev, MD, sole candidate. The documents provided in accordance with the RA of the Law for the development of the academic staff in the Republic of Bulgaria meet all the requirements for holding the said position.

Summarized presentation of the applicant

Dr. Nikolay Dimitrov Kolev was born on 19.06.1968 in Varna. In 1986 he graduated from the IV Secondary foreign language school "Fr. Joliot Curie", Varna, and completed his higher medical education in 1994 at the Medical University – Varna. In 2002 he acquired specialty in “Obstetrics and gynecology”. In 2014 he defended dissertation on topic: “Biochemical changes and transvaginal ultrasound in preterm birth”.

Dr. Kolev's professional career began as a specialist in Obstetrics and gynecology at the Maternity ward at the MPHAT “St. Anna – Varna“ AD, Varna in 2002 until now. Since 2014 he has been a part-time lecturer at the Medical University of Varna, Department of Obstetrics and Gynecology and in the same year was enrolled as a free doctoral student. From 2017 he has been an assistant and as from 2018 he has been a chief assistant at the Department of Obstetrics and Gynecology at the Medical University of Varna.

In addition to the compulsory documents for participation in the competition, Dr. Kolev has also provided certificates of participation in scientific events and postgraduate training courses: Course in "Elementary military medical training" at the Military Medical Academy - Sofia (1996); Training in "Colposcopy in OG", under the guidance of Prof. Dr. I. Karagyozov, Medical University-Sofia (2002); Training in Ultrasound Diagnostics in OG at the Medical University of Varna (2003); Training course about 3D ultrasound diagnostics and qualified to operate with CHISON 8800 crystal 3D ultrasonic scanner (2005); Qualification on topic: "Modern trends in contemporary gynecology", BMA, BSOBGYN (2010); Qualification on topic: "Contemporary Aspects in Obstetrics and Gynecology", BMA, BSOBGYN (2010); Qualification on topic: "Contemporary prenatal diagnostics – risk pregnancy", BMA, BSOBGYN (2012); Qualification on topic: "Preterm birth, premature fetus", BMA, BSOBGYN (2013); Medical training on topic: "Maternal – Fetal Medicine", BMA, Association "Maternal-Fetal Medicine" (2016); Training in "Ultrasound diagnostics in obstetric - gynecological practice". Medical University of Varna (2017); He has participated in 13 national and international scientific forums.

Dr. Kolev has had strong scientific interests in preterm birth - as a medical and social problem; Alternative methods for treating diseases of the female reproductive system; Pregnancy and concomitant systemic diseases.

Dr. Kolev is fluent in Russian and English. He has acquired good computer and statistical skills. He has been a member of the Bulgarian Medical Association (BMA) and the Bulgarian Society of Obstetrics and Gynecology (BSOBGYN).

Dr. Kolev has exhibited high professional competence, collegiality and tolerance, possesses good communication skills and teamwork skills.

Educational and teaching activity

The documents presented show that Dr. Kolev began his teaching experience in 2014 as a part-time lecturer at the Department of Obstetrics and Gynecology at the Medical University of Varna, from 2017 as an assistant and from 2018 as a chief assistant to the same department. The workload reference reports 836 academic hours of teaching activity over the last five years.

As a lecturer, Dr. Kolev delivers lectures and exercises in the "Obstetrics and Gynecology" discipline in the "Medicine" specialty; exercises in the "Obstetrics and Gynecology" discipline of the "Midwife" and "Nurse" major and leads the courses in the "Obstetrics and Gynecology" discipline in the training of interns, graduate students and doctoral students.

Evaluation of diagnostic and therapeutic activity

The attached reference shows that Dr. Kolev has a total of over 27 years of work experience, of which 18 years and 11 months are medical experience. His work experience in the field of Obstetrics and Gynecology totals 17 years and 3 months.

Dr. Kolev is a proven specialist with a significant number of additional qualifications and skills. In his daily practice he performs obstetric and gynecological activities and surgeries, carries out treatment of pregnant women and patients with diseases of the female reproductive system and works in close collaboration with colleagues from different specialties – cardiologists, neurologists, urologists and others.

General assessment of the scientific and research and the scientific and applied activity of the applicant

The total publication activity of the applicant contains 33 scientific papers. Out of them, 29 participate as evidence in the reference on the fulfillment of the minimum requirements for occupying the Associate Professor academic position as per the LDASRB from 2018. There are also 4 publications produced, beyond the supporting material for fulfilling the minimum requirements for occupying the Associate Professor AP.

Dr. Kolev has 9 full-text publications and 1 abstract in scientific publications, referenced and indexed in world-renowned scientific information databases. His full-text publications in non peer-reviewed scientific publications are 17. Full-text publications related to Dr. Kolev's dissertation are 3. Dr. Kolev is also the author of a monograph that he presents as a habilitation work.

Of the publications presented in scientific publications and monographs, Dr. Kolev is: sole author in 1 scientific paper, first author in 8 scientific papers, second author in 5 scientific papers, third and subsequent author in 18 scientific papers.

The presented scientific works and the results of the research work are thematically distinguished in the following scientific directions:

1. PRETERM BIRTH

(A_1-1; B_3-1; Γ_7-4; Γ_8-1; Γ_8-2; Γ_8-3; Γ_8-4; I-1; I-2; I-3)

2. ALTERNATIVE TREATMENT METHODS

(Γ_7-2; Γ_7-5; Γ_7-6; Γ_7-7; Γ_7-8; Γ_7-9; Γ_7-10; Γ_8-5)

3. PREGNANCY AND DENTAL TREATMENT

(Γ_8-6; Γ_8-7; Γ_8-8; Γ_8-9; Γ_8-10)

4. VARIA

(Γ_7-1; Γ_7-3; Γ_8-11; Γ_8-12; Γ_8-13; Γ_8-14; Γ_8-15; Γ_8-16; Γ_8-17; II-2)

The results of the scientific research are cited in 11 bibliographic sources, of which: Citations in scientific publications, referenced and indexed in world-renowned scientific databases or in monographs and collective volumes - 9; Citations in Non peer-reviewed scientific journals – 2. Four citations in dissertations are presented.

Characteristics and contributions of scientific publication

The author's scientific research activity is focused on modern methods for the diagnostics of preterm birth and the application of biochemical markers in the early diagnostics and prevention of preterm birth (10 scientific papers); the use of alternative methods for the treatment of diseases in the area of female genitalia (8 publications), dental treatment of pregnant women and the risk of pregnancy complications (5 publications), as well as the presentation of various clinical cases describing the behavior of OG specialists in pregnant women with rare anatomical features and clinical conditions (10 publications). All these aspects have been considered through the prism of modern medicine and are embedded in the practical work of the author.

I agree with the reference submitted by the applicant on the contributions of scientific papers.

Of significant practical and applied nature is the monograph called "Preterm birth. Modern diagnostics", whose necessity and relevance are determined by the global tendency to increase in the number of preterm births and turn them into a contemporary problem of extremely medico-social importance. In the monograph, Dr. Kolev has traced the pathogenesis, risk factors and current methods of diagnosis, prevention and treatment of preterm birth based on adequate diagnosis and individual approach in women at risk. The new biochemical markers studied and presented by Dr. Kolev, such as cytokines, hormones and enzymes, may be relevant in the etiological model of preterm birth.

In his monograph, Dr. Kolev has summarized the results of his 3-year studies on aspects of preterm birth and concluded that the application of rapid biochemical (immuno-chromatographic) tests in the 24-34 g.w. period, in combination with cervical biometry allow specialists for an extremely short period of time - 10 to 15 minutes, to categorically differentiate (in more than 95% of the cases) high-risk mothers-to-be and to take appropriate therapeutic measures to prevent preterm birth.

Contributions on the topic:

1. For the first time in Bulgaria a prospective study was conducted to determine the phosphorylated form of insulin-like growth factor (pIGFBP-1) in cervical secretion as a specific indicator of preterm birth.
2. A prospective study was conducted for the first time in Bulgaria involving the simultaneous determining of 2 biochemical markers (fFN and pIGFBP-1) within the 24-34 g.w. period. as a specific indicator of preterm birth.
3. For the first time in Bulgaria a diagnostic algorithm has been developed for predicting preterm birth, including two biochemical markers (fFN and pIGFBP-1) and one biophysical marker (cervical length).
4. A considerable volume of literature has been studied, interpreting the evidential value of quality immuno-chromatographic tests and their place as a highly informative, rapid diagnostic and prognostic method in modern obstetric practice.

5. The results of the simultaneous application of the two biochemical tests have been analyzed and the high efficiency of biochemical diagnostics in the prognosis of preterm birth has been demonstrated.
6. A diagnostic algorithm for the study of pregnant women in the period 24-34 g.w. was proposed. It includes two highly informative biochemical markers and one biophysical marker. The three tests included in the diagnostic algorithm are cost-effective, simple in terms of technical implementation, and have quick definitive results – up to 10 minutes from their completion.
7. Combined application of diagnostic tests upon reported negative results minimizes unnecessary hospitalization - costly hospital stays and medication treatment.
8. The described algorithm is introduced and applied in the Maternity ward of MPHAT St. Anna – Varna AD in patients with increased risk of preterm birth.

In the presented scientific papers in the field of "Alternative methods of treatment", Dr. Kolev describes in detail the advantages of using alternative methods for the treatment of diseases of the female genital system.

Contributions on the topic:

9. Familiarizing specialists with medicines and surgical techniques for the treatment of diseases of the female reproductive system.
10. Familiarizing specialists with modern methods of treatment of preeclampsia.
11. Sex hormone-related factors as modulators of the immune response to genital infection.

The scientific publications in the field of Pregnancy and Dental Treatment present research on the awareness of dental practitioners about the possibilities of treating pregnant women and the risk of pregnancy complications from ongoing treatment.

Contributions on the topic:

12. A detailed, systematic and chronological critical review has been made of the methods of dental treatment in pregnant women.
13. The most common complications of pregnancy in the process of dental treatment are presented.
14. The changes that occur most frequently in the body of a pregnant woman in terms of dental health are described.
15. Affirmation of the role of early prophylaxis of dental health during pregnancy.

In the "Varia" section, publications are presented concerning particular fields of medicine, whose author teams involved the active participation of Dr. Nikolay Kolev. Studies

are in the field of diseases of the female reproductive system, pregnancy and concomitant systemic diseases, manifestations of depression and anxiety during pregnancy.

Scientific publications are prepared to serve in the medical students education process.

Conclusion

Based on the analysis of the entire scientific and teaching activity and its compliance with the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria, I have reason to vote "**positive**" and to offer the Honorable Jury to award the academic position "Associate Professor" in the field of higher education 7. Health and sports, professional field 7.1. Medicine, scientific specialty "Obstetrics and Gynecology" to Dr. Nikolay Dimitrov Kolev, MD.

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Prof. Dr. Ivan Atanasov Kostov, Dr. Med. Sc.

City of Varna
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