

OPINION

Subject: Competition for occupation of the academic position of Associate Professor in the field of higher education.

Specialty: Obstetrics and Gynecology.

of Dr. Nikolay Kolev, MD

Dr. Nikolay Kolev completed his medical education in 1994 in the Medical University in Varna. In 2004, he was recognized a specialty in obstetrics and gynecology, and in 2014 acquired Doctor's degree in the same specialty. Since 2002 until present he has been a physician at MPHAT St. Anna, Maternity Ward; 2014-2017 part-time lecturer at the Medical University of Varna, and from 2017-2018 assistant at the OG department of the Medical University of Varna; 2018 until now – Chief Assistant. As a free doctoral student 2012-2014 he defended his dissertation on "Biochemical changes and transvaginal ultrasound PB". He has had a number of qualifications (10).

Educational/teaching load

With a standard of 220 hours, Dr. Nikolay Kolev for the academic year 2017-2018 has had 388 hours (exercises), and for 2018-2019. 2 lectures and exercises of 448 hours.

In this competition, Dr. Nikolay Kolev participates with a total of 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 Law on the development of the academic staff in the Republic of Bulgaria from 2018. There were also 4 publications produced beyond the evidence material for fulfilling the minimum requirements for occupying the Associate Professor AP.

The scientific works produced and the results of the research work have been thematically distinguished in the following scientific directions:

1. PRETERM BIRTH
2. ALTERNATIVE METHODS OF TREATMENT
3. PREGNANCY AND DENTAL TREATMENT
4. VARIA

The scientific publications have been prepared to serve during the studying process of medicine students.

Table 1. Place the author occupies in produced scientific papers	Individual author	1 st author	2 nd author	3 rd author	Subsequent author
Scientific Papers – evidence for meeting the minimum requirements for occupying the Associate Professor academic position					
Monograph	1				
Full-text publications in scientific issues, referenced and indexed in world-renowned scientific information databases		2		1	6
Published abstracts in scientific journals, referenced and indexed in world-renowned scientific information databases			1		
Full-text publications in non peer-reviewed scientific issues		3	4		10
Scientific publications beyond evidence for meeting the minimum requirements for occupying the Associate Professor academic position					
Full-text publications related to the dissertation		3			
Abstracts published of reports from scientific forums					1

Topicality of the problem

Bulgaria is facing a demographic crisis – due to persistent negative indicators due to both low birth rate and high rate of induced or spontaneous abortions and preterm births (PB). PB is one of the main causes of high morbidity among newborns.

The author's scientific – research and teaching activity is focused on modern methods for the diagnosis of preterm birth and the application of biochemical markers in the early diagnostics and prevention of preterm birth; the use of alternative methods for the treatment of diseases of the female genital organs, as well as the presentation of different clinical cases describing the behavior of OG specialists in pregnant women with rare anatomical features and clinical conditions. All these aspects have been considered through the prism of modern medicine and are embedded in the author's educational and teaching work.

1. Preterm birth

Preterm birth (PB) is not only a medical but also a social problem. Despite the efforts of scientific and practical obstetrics, the incidence of preterm births has not decreased over the last decade. PB is the cause of 70% of neonatal mortality and 50% of long-term neurological complications in newborns, many of which are disabled, such as mental retardation, cerebral palsy, central blindness, difficulty in memorization processes. Preterm infants have a higher mortality rate, they require special care in their raising and may have permanent disabilities.

In single pregnancies, the risk of PB is up to 1%, while in multifetal pregnancies it increases significantly and is higher than 10%. Opportunities for the prevention of preterm births should be directed to the detection and treatment of cervicovaginal infection and not only to clinically manifested infection, but also to all “veiled” minor infectious diseases, with particular attention to TORCH infections. The modern biochemical tests for the diagnosis of PB used by Dr. Nikolay Kolev are:

- Full-Term test - за определяне на фетален фибронектин
- Actim partus test – for the detection of phosphorylated insulin - like growth factor – 1
- Parto Suer test – determination of placental microglobulin alfa-1
- Progesterone
- Ferritin

Combined screening programs /measurement of cervical length by ultrasound and some of the biochemical markers/ have been described for calculating the risk of PB. The monograph of Dr. Nikolay Kolev also examines the normogram of Mansoura, namely a complex of three parameters – cervical length of less than 25 mm., posterior angle of the cervix > 90%, diameter of the internal opening of the cervical canal over 6 mm. When applying biochemical diagnostic tests in combination with cervical biometrics, it is possible to determine in about 95% of cases the risk of PB and the appointment of appropriate retention therapy.

For the first time in Bulgaria, a diagnostic algorithm has been developed to predict preterm birth, including two biochemical markers (fFN and pIGFBP-1) and one biophysical marker (cervical length).

2. Alternative treatment methods (I would call them preventive, adjuvant or treatment of comorbidities).

The main highlights in this field are:

- preeclampsia and its treatment; - biochemical parameters, risk of cardiovascular diseases and, despite treatment, development of preeclampsia in 30-40%. High quality prenatal care has prevented more of the complications.

The second aspect concerns the diagnosis of urogenital infections caused by Chlamydia trachomatis, as well as the treatment of Condylomata Acuminata. While treatment for chlamydia is possible, it is not effective enough for Condylomata Acuminata. There is a link between preterm birth and intrauterine infections, which is found in up to 40% of cases, with WHO data being reported that genital chlamydia is the most common sexually transmitted infection. There

have been also considered cases of pregnant women with diabetes and their treatment.

3. *Pregnancy and dental treatment*

- A detailed, systematic and chronological critical review of dental treatment methods in pregnant women has been made.

-The most common complications of pregnancy during dental treatment have been presented.

-The changes that occur most frequently in the body of a pregnant woman in terms of dental health have been described (Gingivitis, masticatory apparatus changes, tooth decay, additional training of dental technicians in the field of selective laser sintering, stomatitis).

- The role of early prevention of dental health has been confirmed.

4. *Varia.*

Publications have been presented concerning particular fields of medicine, in which authors' teams Dr. Nikolay Kolev took an active part. Studies are in the field of diseases of the female genital system, pregnancy and concomitant systemic diseases, manifestations of depression and anxiety during pregnancy. Between 12 and 15% of women meet the criteria for depression at some point during pregnancy or after childbirth (2 and 3 pregnancy trimester). The risk factors that predispose to depression have been discussed. Risk pregnancy anxiety levels have been investigated, with the focus being on daily smoked cigarettes, complications from previous pregnancies, and the risk of miscarriage.

This section also includes cases of uterine, vulva cancer, pregnancy in a patient with SLE and casuistry.

Academic reference for citations of Dr. Nikolay Kolev, MD by foreign and Bulgarian authors (in scientific journals, peer-reviewed and indexed in the world database or reviews in non-peer-reviewed journals), are a total of **11**.

IF (Indexed/referenced mostly in Scopus) is 246.

Getting acquainted with the scientific work of Dr. Nikolay Kolev, MD, I was impressed by the multifaceted involvement not only in the field of PB (main focus) but also in other aspects of obstetrics and gynecology and his ability to subordinate versatile pathology with its participation in the overall picture of PB, as well as the course and outcome of birth.

CONCLUSION

I believe that the outlined scientific applied value of Dr. Nikolay Kolev, MD, as well as the contemporary approach to the challenge of time in obstetrics and gynecology (PB and risks, comorbidity) characterize Dr. Nikolay Kolev as a prospective, aspiring, young scientist.

His academic workload, as well as his ability to promote knowledge (monograph), fully satisfy the requirements of the Law on the development of academic staff of the Republic of Bulgaria and the Medical university of Varna. I strongly recommend that the honorable members of the scientific jury award Dr. Nikolay Kolev, MD the academic title "**Associate professor**".

Prof. Dr. Krasimira Kisyoova, MD