

REVIEW

by Prof. Dr. Kiril Vasilev Draganov, DSc
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"Acibadem City Clinic UMBAL Tokuda"

Subject: Competition for the academic position "Professor" in the field of higher education 7. "Health and sport", by professional direction 7.1. "Medicine", scientific specialty "Obstetrics and gynecology", for the needs of the Obstetrics and Gynecology Clinic of "Acibadem City Clinic UMBAL Tokuda" EAD, announced in "State Gasete" no. 98/24.11.2023

1. Comment on the procedure

By order No. 15-05-09#1/30.01.2024 of the Executive Director and Procurator of "Acibadem City Clinic UMBAL Tokuda" and on the basis of Art. 4, Para. 2, Art. 29a of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), art. 2, paragraph 2, art. 62, para. 1 and para. 2 of the Regulations for the implementation of the ZRASRB in "Ajibadem City Clinic UMBAL Tokuda", art. 61 of the Regulations for the Development of the Academic Staff at "Ajibadem City Clinic UMBAL Tokuda", as well as on the basis of the Decision of the Scientific Council (protocol No. 49/01.11.2023), I have been appointed as a member of the Scientific Jury for the above-mentioned competition.

The only candidate in the competition is Associate Professor Petar Tsankov Markov, PhD. I received the applicant's complete set of documents on time in electronic and paper format according to the established order.

The documents, as well as the course of the procedure, are fully compliant with the legal framework in force in the country and meet all requirements.

At the first meeting of the Scientific Jury, I was designated as a reviewer.

2. Brief professional and biographical data. Postgraduate.

Assoc. Prof. Petar Tsankov Markov, PhD, graduated in "Medicine" in 2002 at the MU - Sofia with excellent results. In the period 2003-2007, he was a specialist in the Department of Obstetrics and Gynecology, Sofia University, and in 2007 after successfully passing the state exam, acquires a specialty. In the period 2009-2017, he was an assistant in the same department. Since the beginning of 2018, Prof. Markov has been the Head of the Obstetrics and Gynecology Department, Acibadem City Clinic UMBAL Tokuda. In 2018, he was awarded the academic title "Associate Professor" in the scientific specialty "Obstetrics and Gynecology".

The candidate in the current competition holds a master's degree in "Public Health and Health Management" (PHS, MU Sofia, 2012).

From 2012 to 2020, Dr. Petar Markov is an assistant and associate professor at the Faculty of Health Sciences, Sofia University, where he teaches.

Driven by the desire for continuous professional development and improvement, Prof. Markov has conducted numerous courses for postgraduate qualification in the country and abroad - "Gynecological operative technique", "Ultrasound and Doppler diagnostics in obstetrics", "Gynecological endoscopy", "3D ultrasound in obstetrics and gynecology", "Colposcopy and destructive treatment of cervical precancers" and others.

Member of BLS, BDAG, BAUAG, BAOG.

3. Scientific production, citations, IF

Associate Professor Petar Markov, PhD, is a doctoral student of independent training at the Health and Medical Sciences, Sofia University in the period 2012-2015, and as such developed a dissertation on the topic "Problems of nutrition in women of childbearing age - a risk factor for reproductive health", defended on 06.01.2015. Thus, he acquired the educational and scientific degree "PhD" in "Social Medicine and Organization of Health Care and Pharmacy".

Associate Professor Petar Markov, PhD, participated in the current competition with 121 scientific activities. All of them are after 2016 and were not submitted for review during participation in other (previous) contests. Included are 1 monograph, 93 written scientific works and 27 participations in scientific forums only with presentations without printed abstracts.

The candidate's published scientific works can be grouped as follows:

(1.) Full-text publications – 84 in total:

1.1. Monograph (habilitation thesis) – 1;

1.2. Publications in Bulgarian - 67 (first author - in 36, second author - in 16, third and subsequent author - in 15);

1.3. Publications in foreign publications – 16 (first author - in 12, second author - in 3, third and subsequent author - in 1);

(2.) Published summaries of participation in scientific forums (congresses, conferences, symposia) - 10 in total, all in foreign sources (second author - in 2 and third and subsequent author - in 8)

A reference from the Central Medical Library, MU - Sofia (issue no. 730/06.12.2023) certifies a total of 177 citations of Prof. Markov's works in Bulgarian sources, 121 of which are after 2016. In the databases Scopus, Web of Knowledge and Google Scholar, 64 citations in

foreign journals were searched, all after 2016. Thus, the total number of discovered citations of Prof. Markov's scientific works after 2016 is 185.

The overall impact factor of the journals in which his articles have been published is 53.44. According to the database Scopus, Web of Knowledge, Google Scholar for the period after 2016, the scientific output of Associate Professor Petar Markov has h-index=3.

The large number of citations, as well as the high overall Impact Factor and h-index of the candidate's works prove the true value and scientific weight and significance of his research.

4. Scientific research activity and contributions.

The thematic areas discussed and analyzed in the studies of Associate Professor Petar Markov, PhD, as well as the scientific-theoretical and applied contributions of his scientific production, are diverse and cover large areas of the domain of obstetrics and gynecology. Some of them also have an interdisciplinary character. All this is the result of long-term, persistent, thorough and dedicated work.

In summary, the research activity and the contributions of Prof. Markov's developments can be presented in the following five groups:

(1.) Delivery in cases with placenta previa and abnormally attached placenta (Monograph and scientific works with no. 1, 9, 22, 23, 24 from the list of participations in scientific forums)

Delivery in cases of abnormal placentation continues to be a serious challenge in obstetric practice, requiring sufficient practical experience, an adequate approach and timely and accurate actions by each member of the multidisciplinary team faced with the challenge. With a clear understanding of the complexity and significance of the problem and based on his many years of practice, Prof. Markov began a prospective study in 2016, filming the operations in real time. This enables a maximally objective assessment and analysis of cases with an emphasis on the difficulties, extreme moments and complications of operative childbirth, the techniques, methods and means that can be relied on for a more favorable outcome of these situations and reduction of risks.

The acquired prospective experience has been presented at a number of scientific forums. The apogee of these scientific searches is the monograph published in 2023, entitled "Placenta previa. Endgame". In a volume of 149 pages, the author presents the modern literary data on the problem, rules and algorithms for action, presenting also 31 of his own cases. The work is substantial and richly illustrated. The bibliography is up-to-date, and the cited authors are undisputed authorities in this field. The high scientific value of the work is due not only to the qualities listed above, but also to the contributions, which can be classified into three groups:

(a) contributions of an original nature:

- for the first time in Bulgaria, the experience with operative delivery in cases with Placenta previa and Placenta Accreta Spectrum has been systematically and consistently presented;
- also for the first time in our country specific techniques have been described and used to limit or compensate the blood loss during the operative delivery of such patients - intravascular balloon occlusion and autohemotransfusion;
- some extremely rare cases are described, which are casuistry and on a global scale - spontaneous rupture of the uterus with placenta percreta, as well as a combination of Guillain Barré syndrome with placenta previa and placenta accreta spectrum;

(b) contributions of an applied nature:

- placenta previa and placenta accreta spectrum are presented from the point of view of risk factors for occurrence, frequency, principles for preoperative preparation in these patients, etc.;
- the multidisciplinary approach in these cases is a "condition sine qua non" for a favorable outcome and this is one of the highlights of the monograph. It is a logical conclusion that this type of delivery should be performed only and only in large multi-specialty hospitals, which have, in addition to experienced obstetrics-gynecology, neonatology, resuscitation teams, as well as their own hemotransfusion center, paraclinical structures, etc.;
- the optimal period for planned delivery in the pre-term period of pregnancy has been determined, applying an individual approach in each specific case.

(c) methodological contributions:

- a major place in the monograph is given to modern behavior in the operating room - specifics of anesthesia, operative access and methods of controlling bleeding;
- peripartum hysterectomy is a possible endgame scenario. In this aspect, operative approaches and techniques, specifics relating to intraoperative and postoperative care, potential complications and their treatment are discussed;
- a detailed overview of foreign literature was made and specifically each of the discussed topics was described and compared with personal experience in Bulgaria

(2.) High-Risk Pregnancy and Twin Pregnancy (Scientific Papers No. 3, 26, 27, 50, 69, 89)

Perinatal and maternal morbidity and mortality, although rare, are directly related to a number of specific complications occurring during pregnancy. Twin pregnancy is a condition that is also considered a "pregnancy at increased risk", which poses its own question marks - the period of wear of pregnancy, the choice of time and method of delivery.

(a) contributions of an original nature:

specific clinical conditions that complicate pregnancy and increase the risk are described, some of which are described for the first time in Bulgaria and represent casuistic cases worldwide;

standards have been introduced for ultrasound examination in uncomplicated and complicated twin pregnancies;

3. Medico-social and medico-ethical problems (Scientific works with no. 1, 16, 20, 32, 37, 40, 41, 48, 49, 51, 56, 57, 59, 60, 62, 66, 68, 70, 71, 77, 82, 83).

This group includes scientific works aimed at improving the quality of public healthcare and the functioning of the healthcare system. In this aspect, they have contributions of a scientific-applied nature and are the result of scientific developments analyzing specific factors (e.g. nutritional deficiencies and imbalances) directly affecting the health status of specific risk groups - children, women of childbearing age, pregnant women, women in menopause. A number of publications also address some medico-ethical issues, e.g. those related to the quality of life, as well as the need for informed choice, autonomy and confidentiality of patients when making decisions related to their health.

(4.) Evaluation of the dietary regime on the health of at-risk population groups (Research Papers No. 4-12, 16-22, 32-41, 42-47, 53, 56, 58, 60-65, 66-68, 71-74, 76, 78-82)

Women of childbearing age are a risk population group due to their relatively higher and specific physiological needs for essential nutrients. The unbalanced nature of their nutrition is associated with an increased health risk of reproductive dysfunctions and problematic future wear of a healthy and viable fetus. Therefore, rational nutrition in this population group is extremely important, and the opposite can lead to serious deficits, resp. risks associated with pregnancy. Similarly, such deficiencies in the nutrition of infants and children are also a risk point for serious health problems.

(a) contributions of an original nature:

national and regional problems in food consumption are identified;

for the first time, an assessment of the reproductive health risk of nutritional imbalances in women of childbearing age was carried out;

(b) contributions of an applied nature:

a complex expert assessment was carried out and recommendations were made for deficiencies in the nutrition of infants and children;

practical guidelines have been developed for optimizing the nutritional pattern of women of childbearing age in order to improve fertility health;

guidelines have been developed for the nutrition of pregnant women in our country;

(5.) Ultrasound in obstetrics and gynecology (Scientific works with no. 2, 15, 24, 25, 28-31, 54, 84-88, 90-93)

Ultrasound diagnostics (US) is a routine method in a number of clinical disciplines, including and in obstetrics and gynecology. Advanced equipment allows the use of ultrasound in obstetrics (including for prenatal diagnosis and pregnancy monitoring) and gynecology. The contributions of Prof. Markov's works in this direction are mainly of a scientific and applied nature and are as follows:

- the experience with the prenatal diagnosis of a number of fetal structural anomalies has been systematized;
- the possibilities of 3-D ultrasound in Obstetrics are described;
- the possibilities of 3-D transvaginal ultrasound in Gynecology are described;
- standards and algorithms have been developed for conducting ultrasound examination in Obstetrics and Gynecology;

5. Educational and teaching activity

During the period 2016-2023, Associate Professor Petar Markov, PhD, conducted an extremely active educational and teaching activity. Certificate from FOZ, MU - Sofia (issued No. 1274/15.12.2023) proves a study load realized by lectures, practical exercises, seminars and exams in the disciplines "Obstetrics" and "Gynecology" of 339.75 and 347.25 study hours, respectively. Official note from ASK UMBAL Tokuda (ex. No. 19-644/04.12.2023) certifies 449 study hours, realized with specialists and continuing education.

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Conclusion

I have known Prof. Dr. Petar Markov, PhD since the beginning of his work at "ASK UMBAL Tokuda" in 2018. I have had the pleasure of repeatedly using his consulting services for patients with "complex" pathology and then operating together, performing multivisceral resections for oncological diseases of pelvic organs. During the more than 5 years that have passed, I have become convinced that Assoc. Prof. Markov is an extremely good operator, with an accurate assessment of challenging situations and with justified, reasoned and precise actions. Takes

responsibility for all "difficult" surgical deliveries. Empathizes with the suffering of her patients. His professionalism, his dedication to his profession and his moral and ethical qualities are a good example for all students, interns and young specialists in the Clinic of Obstetrics and Gynecology.

During the review and review of the applicant's documents, I did not find any evidence of plagiarism or duplication of evidence.

The completed data for the fulfillment of the minimum requirements for holding the academic position "Professor" show a total of 2046 points, which significantly exceeds the required 550 points.

In conclusion and based on the overall diverse and purposeful diagnostic-therapeutic, scientific-research and teaching activities, my comprehensive assessment of Associate Professor Petar Tsankov Markov, PhD, is that he is a fully formed specialist, scientist and teacher. I take the liberty of recommending to the honorable scientific jury to award Petar Markov, PhD, the academic position "Professor" in the scientific specialty "Obstetrics and Gynecology" for the needs of the Obstetrics and Gynecology Clinic, "Acibadem City Clinic UMBAL Tokuda", for which I confidently vote "YES".

Prepared the review:

/prof. Dr. Kiril Vasilev Draganov, DSc/

18.02. 2024