

REVIEW

By

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Internal member of Academic Jury appointed by Order No 788/13.03.2023 of the Rector of Trakia University – Stara Zagora

Regarding: Competition for acquisition of the academic rank of “Associate Professor” in the area of higher education 7. Healthcare and Sport, professional field 7.4. Public Health; scientific specialty “Healthcare management” for the purposes of the specialty “Medical Laboratory Technician” in the Medical College to Trakia University – Stara Zagora.

Only one candidate takes part in this competition: **senior lecturer Katya Stefanova Kichukova, PhD**, lecturer at the Medical College of Trakia University – Stara Zagora.

I. Career profile of the candidate

Katya Stefanova Kichukova was born in 1969 in the town of Kotel. She graduated the Institute for Training of Health Care Personnel at Secondary Specialized Level in Plovdiv (1989) as a Medical Laboratory Technician, and later acquired a degree in the same specialty at the Semi-higher Medical Institute in Sliven (1993). Between 2004 and 2007 she acquired a bachelor degree in Health Care Management from the Medical Faculty of Trakia University, Stara Zagora. In 2012 she obtained a master’s degree in the same specialty at the Faculty of Public Health, MU-Plovdiv with a professional qualification “Healthcare manager and practice instructor”. In 2022 she successfully defended a thesis on *Continuing education as a means of increasing the professional competence of medical laboratory technicians* and was awarded the educational and scientific degree of Doctor in the doctoral programme “Health Care Management” in the professional field of 7.4. Public Health.

Katya Kichukova started her professional career as a medical laboratory technician at the Clinical Laboratory of the Municipal Hospital in Kotel right after her graduation. Since 2001 she has worked as a laboratory technician in the Central Clinical Laboratory of Multi-profile Hospital for Active Treatment “Prof. Dr. Stoyan Kirkovich” – Stara Zagora. Her teaching career started in September 2009 at the Medical College of Trakia University – Stara Zagora in the specialty “Medical Laboratory Technician”. In 2016 she became a senior lecturer and has been serving as such to date.

The educational and career development of the candidate in this competition undoubtedly prove that she possesses significant teaching experience and has established herself as a competent specialist in her professional area. Dr. Katya Kichukova continues to increase her qualification as a lecturer and a scientist. This is supported by the attached diplomas, certificates and proofs of attendance of scientific forums in Bulgaria and abroad. She has participated in 23 courses for postgraduate qualification and some trainings in Lithuania and North Macedonia.

She speaks French at A1 and English at B2 level.

The professional biography of senior lecturer Katya Kichukova, PhD, and the research work she has submitted show the purposefulness and consistency of her research interests, concern about public health issues and the training of laboratory students, which fully meet the direction of the announced competition.

II. General description of the materials submitted for this competition.

It is notable that Katya Kichukova, PhD has prepared the documentation for this competition with accuracy and diligence. She has presented all necessary materials, required by the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Rules for its implementation and the Rules for the conditions and order of acquisition of scientific degrees and occupation of academic positions at TrU – Stara Zagora, which facilitates the precise quality and quantity evaluation of the entire academic development of the candidate.

She has also submitted the necessary evidence for her publication activity and official inquiries with citations of her research works by Bulgarian and international authors, from Central University Library of Trakia University – Stara Zagora for IF and SJR and for citations included in the databases Web of Science and/or Scopus. Besides the required documents, the materials also contain additional inquiries, certificates, proofs, etc., which verify all conditions, related to the qualification, professional activity and achievements of the candidate. A declaration for original and true research has also been included.

III. Evaluation of the candidate's research

General characteristics of the submitted research works

The scientific production which Katya Kichukova has submitted for this competition fully complies with the minimal national requirements for the academic rank of „Associate Professor”.

The works which are subjected to review in the current procedure are presented as follows:

- ✓ Monograph – 1 as a single author
- ✓ Book chapter – 1 item
- ✓ Publications in scientific journals – a total of 29, comprising:
 - Publications in journals referenced in Web of Science – 1 item
 - Publications in journals and collections included in the national referential list – 16 items
 - Publications in journals, indexed in secondary databases – 12 items (of which 1 in print)

It is notable that the distribution of the research works by year is very regular, which signals the purposeful and well-planned academic development of the candidate. A considerable part of the presented publications has appeared in established specialized scientific journals. The list of publications is accurate and the necessary supporting materials have been included.

The candidate in this competition is the sole or first author of six research works. The co-authorship with other colleagues in part of the publications exemplifies the abilities of Katya Kichukova, PhD to seek common points and to collaborate in an interdisciplinary team.

The works of senior lecturer K. Kichukova contain certain scientific contributions to medical theory and practice and cover a wide range of scientific problems. They address actual and important issues in this area and fall within the focus of the specialty of this competition. The presented objective and accurate inquiry into the scientific contributions in several leading directions of research activity is acceptable. They may be summarized into the following main directions:

I. Increasing the professional competence of medical laboratory technicians by taking advantage of the possibilities of continuing training (scientific and theoretical, methodological and applied character).

The professional competence of laboratory technicians is the subject of a considerable part of the scientific works in her entire academic activity (dissertation and monograph). She has used original methodologies, developed for the purposes of the studies. The updating and improvement of the professional competences of medical laboratory technicians is a continuous process, determined by the exceptional growth of medical sciences. In this sphere the studies are related to:

1. A thorough study among students, lab technicians and physicians on their interest in continuing training, and particularly on CE for medical laboratory technicians. The preferred forms of lifelong learning, the practical applicability of the knowledge acquired through short-term courses as the most popular form of postgraduate training are examined. The attitudes of employers to offering incentives for postgraduate training to lab technicians are determined. A positive attitude in laboratory students to lifelong learning as a resource for increasing their potential competence is observed. **[Dissertation, monograph]**
2. A thorough study on the motivation for choosing a major among laboratory students and practicing laboratory technicians. The influences of internal and external motives for participation in continuing education are studied. The impact of alienation from the specialty and the profession is examined in lab technicians **[Dissertation, II2]**.
3. The motivation for achievement in laboratory students is explored, as well as its impact on the interest in various lifelong learning forms. **[II2]**

In this direction of K. Kichukova's scientific activity, her monograph *Lifelong learning for medical laboratory technicians – present and future* stands out convincingly. The author describes the conceptual foundations and the paradigm of continuous professional training, the organizational and regulatory aspects of this learning for laboratory technicians and the opportunities for their career development. The monograph reflects the results from a study on the interests, attitudes and inclinations of students and in-service technicians in various learning forms and the possibilities for opening profile specializations. The theoretical argumentation and results related to realizing postgraduate training of various duration, e-learning, as well as the attitudes of employers to incentives and support to lab technicians taking CE courses all have the character of scientific contribution.

II. The second direction reflects the participation of the candidate in studies related to introducing new indicators and nutritional supplements for the improvement

of diagnostics and changing the course of treatment of some socially significant diseases (contributions with scientific and theoretical, methodological and applied character).

1. Participation in a pilot study for adapting methods for determining the serum levels of paraoxonase and arylesterase activity of PON1 (belongs to the paraoxonase family, comprising three isoenzymes PON1, PON2, and PON3). The relationship between the activity and concentration of PON1 and the severity and degree of cardiac coronary disease has been proven. A positive association of arylesterase activity to total cholesterol and triglycerides has been established, yet without any interrelation with HDL [I.1].
2. A study on new aspects of beneficial effects of lactic acid bacteria. The author has observed the influence of the combination of two original Bulgarian strains of lactic acid bacteria (*Lactobacillus brevis* and *Lactobacillus plantarum*) on indicators of the lipid profile in rats. A good tolerability of the two strains of potential probiotics has been found in the experimental animals. No convincing proof for the beneficial use of their intake on the lipid profile has been established, perhaps due to the short-term period of strain intake [III.B1].

III. Studies on some socially significant and dangerous infectious diseases and the role of the human factor for their spread (contributions with scientific and theoretical character)

1. In a conducted study it was found that Echinococcosis is a socially significant disease for the Stara Zagora region with an average morbidity for 2006-2014 above the average for the country. A project has been initiated to examine the environment of vulnerable and risk groups for contamination with parasitic elements, which awaits the publication of its results [III. A3. IV B8].
2. A historical review on the efforts and the anti-epidemic measures taken by all institutions in combating malaria and the vectors of malaria plasmodia has been done. Though rare, there are cases of malaria in the southern parts of the country, or in migrants [III. A3, III. A4].
3. Some of the significant ancient and newly emerged disease that have had a strong impact on the history of mankind are explored, including COVID-19. The role of people's behavior has been studied as a factor for the emergence of pandemics [III A4, IIIA5, IVB8].
4. The main risk factors for the spread of *T. gondii* among risk groups of the population of Stara Zagora region are studied. Among the main risks for contracting the disease are established – consumption of uncooked meat, cohabitation with infested pets, etc. [II.1.]

IV. Application of innovative approaches and technologies in medical training and education (contributions with theoretical and applied character)

Interactive learning methods for students of the specialty „Medical Laboratory Technician”, viewed as innovative practices in teaching and their application in various disciplines among the medical specialties are evaluated as very effective. Contemporary information and communication technologies offer a wide range of opportunities for visualization and interaction in learning.

1. The positive sides of interactive learning methods have been defined. The advantages of situational methods in medical specialties are reviewed, as well as the resources of research methods (through inclusion of students in projects) for developing essential skills in students. The role of the instructor is presented both as a source of knowledge, and as generator of ideas. In the use of the interactive learning approach, better results are achieved, compared to classical teaching forms [III B2, III B3, III B4, IV A1].
 2. The possibilities for applying interactive presentation systems are explained – interactive whiteboard and document camera in the teaching of students from the Medical College [IV A1].
 3. The use of e-forms of learning is explored with respect to recent teaching forms, which may be alternative, complementary or enriching the learning process. The attitudes of laboratory students, laboratory technicians and physicians to using e-forms in postgraduate training of specialists have been studied [IV A2].
- V. Contemporary approaches, applied in medical laboratory sciences and oriented to various areas of the wide profile preparation of medical laboratory technicians (contributions with theoretical and applied character).**

The articles are oriented to different areas of the wide profile training of medical laboratory technicians.

1. A study among students from the Medical College in Stara Zagora about their awareness of Human Papilloma Virus (HPV). Despite the relatively low knowledge of the diseases caused by HPV, students are familiar with the existence of a vaccine. [III B2]
2. A study among the inhabitants of Chirpan region on the ways of getting infected with HIV and the possibilities for protection. High awareness of the population about the ways of infection is found, but a lower level of knowledge in the persons who declare their use of protection [III B2].
3. A retrospective study on people with clinical signs of Acute Coronary Syndrome has been done. The values of the serum Troponin, benchmark in diagnosing Acute Miocardial Infarction, slightly increase after catheterization and stent placement, then gradually return to normal. The risk of AMI is higher in people with multiple risk factors [III B1].
4. The self-assessment of the knowledge of laboratory students at the Medical College in Stara Zagora about tuberculosis has been studied and analyzed. [III B6].
5. An empirical survey of the opinion of laboratory students on the quality of the acquired knowledge for the pre-clinical stage of laboratory analysis. The students evaluate the teaching content in the section as up-to-date, including the specifics of the requirements at this stage in children [III B9, IV A4].

VI. Varia

Reviewed are the psychosocial aspects of natural disasters. It is found that during a calamity (natural cataclysms, acts of terror, pandemic influenza, etc.) the psychiatric traumas may exceed the physical. Main aspects in the attitudes of TrU medical students to narcotic substances are studied. Despite the massive supply, the share of students who have used or are using narcotic substances at the time of the survey is very low. [IV B6]. The risk factors for osteoporosis have

been studied among women in different age groups. The levels of Vitamin D are examined as one of the key factors for the disease. A low level of Vitamin D is found in two thirds of the studied persons [IV A3, IV B2].

Scientific activity

Katya Kichukova has realized 32 participations in scientific forums, of which 18 national, 7 national with international participation, and 7 in international conferences abroad, which guarantees the popularity of her scientific production. She has served on the organizational committee of three national conferences.

Participation in the operation and management of projects.

The candidate in this competition has provided information for participation in 13 projects, as seven of them were university research projects during 2016-2023, implemented at the Medical College, and six research projects of the Medical Faculty of Trakia University – Stara Zagora.

Reflection (citation) of the candidate's publications in national and international literature (publication image).

In the citation inquiry there are 11 citations in Bulgarian and foreign reputable journals, which proves the quality of the realized scientific production of the participant in this competition. An inquiry by the Central University Library of TrU with citations in scientific journals, referenced and indexed in international databases with scientific information SCOPUS and Web of Science is included – 7 citations.

IV. Evaluation of the pedagogical activity

With respect to her competences, Dr. Katya Kichukova, PhD teaches practical seminars to students from the Medical College of Trakia University, Stara Zagora. She conducts seminars in the following disciplines: Clinical laboratory, Parasitology, Clinical practice and an elective in Quality control in the laboratory practice. Kichukova actively participates in the development and updating of curricula in the above mentioned courses.

The Inquiry for lecturing workload, presented with the documents for this competition verifies that Dr. Katya Kichukova conducts seminars, practicals, and pre-diploma traineeships with an average load of the total lecturing period amounting to over 630 hours per year. This is a proof for the fulfillment of the requirements of this competition for necessary lecturing workload.

V. Personal impressions

I have known the candidate in this competition personally since she was a student in the masters programme and independent doctoral student at the Faculty of Public Health of MU-Plovdiv. I have excellent impressions of her preparation and attitude to research activity. I believe she is a rigorous researcher and competent lecturer, devoted to her profession. She has put a lot of energy and effort into her professional development and has achieved impressive results. Her academic career to date is a logical result of her entire research and pedagogical work.

I wish her successful development in the scientific directions to which she has turned her research attention.

VI. Compliance with the minimal requirements for the scientific and teaching activity of the candidate for occupying the academic rank of “Associate Professor” in professional field 7.4. Public Health at the Medical College of Trakia University – Stara Zagora.

With respect to the compliance with the minimal national requirements and those of the Rules for the conditions and order for acquisition of scientific degrees and academic positions at Trakia University – Stara Zagora (for acquiring the academic rank of “Associate Professor” in the area of higher education 7. Healthcare and Sport in professional field 7.4. Public Health for the scientific specialty “Healthcare Management”), and based on the presented list and evidence with research works and citations it is clear that **senior lecturer Katya Kichukova, PhD meets all requirements and covers the regulatory criteria for the separate groups of indicators.**

Group of indicators	Content	Requirements for the academic rank of “Associate Professor”	Candidate: senior lecturer Katya Kichukova, PhD
A	Indicator 1	50 points	50 points
B	Indicator 2	---	---
C	Indicator 3 or 4	100 points	100 т. /Monograph/
D	Total sum of indicators 5 to 9	200 points	209 points
E	Total sum of indicators 10 to 12	50 points	110 points
F	Total sum of indicators 13 to the end	-	75 points

VII. Conclusion

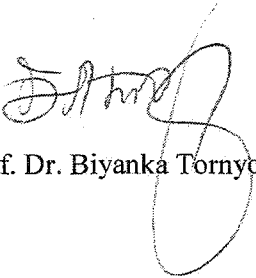
After familiarizing myself with the submitted materials and research work, proving the considerable professional experience as a lecturer and on the basis of the complex evaluation for the fulfillment of the required quantity scientometric and additional quality criteria for scientific and teaching activity, I believe that the candidate Katya Kichukova, PhD fully meets the set out requirements for acquiring the academic rank of “Associate Professor” at the Medical College of Trakia University – Stara Zagora.

On the basis of the presented research work in volume, quality and thematic pertinence to the direction of the announced competition, the related unarguable scientific contributions and by taking into account the character of the candidate’s research and teaching activity, **I give my positive evaluation** and strongly urge the honorable members of the Academic Jury **to confer the**

academic rank of “Associate Professor” to Katya Stefanova Kichukova, PhD in the scientific specialty “Healthcare Management”, professional field 7.4. Public Health, area of higher education 7. Healthcare and Sport for the purposes of the specialty „Medical Laboratory Technician” at the Medical College of Trakia University – Stara Zagora.

05.05.2023

Reviewer:


/Prof. Dr. Biyanka Tornyoova/