REVIEW

by
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Competition for the academic position of "Associate Professor" in the field of higher education 7. Healthcare and Sports, professional field 7.1. Medicine, scientific specialty "Surgery", announced in the State Gazette, No. 102/28.11.2025, according to report No. 102/09.01.2026 and decision of the Faculty Council of the Faculty of Medicine (No. 52/12.01.2026), for the needs of the Department of General and Operative Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna and the University Hospital "St. Marina" – Varna.

The candidate in the competition is Chief Assistant Dr. Turgay Turgay Kalinov, PhD The review is based on the competition materials submitted: CV, list and summaries of scientific works, monographic work, reference for scientific contributions, reference for participation in national and international scientific forums, as well as data on the candidate's teaching and clinical activities.

I. PROFESSIONAL DEVELOPMENT AND ACADEMIC CAREER

Senior Assistant Professor Dr. Turgay Turgay Kalinov, PhD, is a graduate of the Medical University of Varna, where he completed his medical studies in 2017. His professional development has been consistent and purposeful within the structure of the University Hospital "Sv. Marina" – Varna, where he specialised in surgery from 2017 to 2022 and has been working as a surgeon since 2022. His biographical data shows a professional trajectory characterised by early involvement in clinical practice, systematic scientific development and consistent commitment to teaching. His biographical data shows a professional trajectory characterised by early involvement in clinical practice, systematic scientific development and consistent commitment to teaching.

The candidate's clinical activity is focused on the diagnosis and surgical treatment of acute and chronic diseases of the digestive system, biliary-hepatic system, pancreas, retroperitoneum and skin, including high-tech minimally invasive interventions using a laparoscopic and robot-assisted approach. This is not just a formal list of activities, but evidence of the candidate's real positioning in the most dynamic areas of modern abdominal surgery.

II. DISSERTATION

The candidate's dissertation on **"The Application of Virtual Reality Simulators in Laparoscopic and Robotic Surgery Training**"   occupies a particularly important place in his academic development. Although the topic is mainly developed through related publications and abstracts in the presented materials, it is clear that this is a work with a contemporary scientific focus and significant practical value for surgical education. Data from publications related to simulation training show that the da Vinci Skills Simulator virtual platform has been used in structured training programmes and has been analysed both in terms of the subjective satisfaction of trainees and through objective indicators such as execution time, accuracy, economy of movement and development of technical skills. Students report high satisfaction and strong motivation to continue their development in robotic surgery, and objective indicators demonstrate consistent progress during training.

I believe that this dissertation has significance beyond the scope of purely educational research. It addresses one of the most important issues in modern surgery – how to safely, quickly and standardisedly train the new generation of surgeons in the era of minimally invasive and robotic technologies. Its value lies in the fact that it presents virtual reality not as an auxiliary tool, but as a structural element of the modern training paradigm. In this sense, the work has not only pedagogical but also strategic significance, as it creates a basis for faster integration of young surgeons into real surgical practice, while simultaneously improving the safety and quality of training. Quite naturally, this line of research is also linked to the candidate's practical work in creating and organising training in robotic surgery in a university environment.

III. SCIENTIFIC ACTIVITY

The candidate's overall scientific output comprises 15 scientific publications, of which 11 are indexed in the international databases Web of Science and Scopus, with several of them published in journals with an Impact Factor. The publications cover topics related to minimally invasive and robotic surgery, colorectal surgery, pancreatic surgery, and surgical education.

A total of 6 citations have been recorded, including 5 citations in international scientific journals, indicating the visibility of the candidate's research within the international scientific literature. The presented scientific output meets and exceeds the minimum scientometric requirements for the academic position of Associate Professor.

Type of Scientific Output	Number	Notes
Total number of scientific publications	15	Meets the required criteria
Publications beyond the minimum requirements	1	Presented additionally
Monograph (habilitation thesis)	1	Single-author work
Publications in journals indexed in Web of Science / Scopus	11	Part of them with Impact Factor
Publications in peer-reviewed scientific journals (non-indexed)	4	National scientific journals
Publications with Impact Factor	4	International journals
Review articles and case reports	≤40%	Within the allowed proportion
Citations in WoS / Scopus indexed journals	5	Main citations
Citations in other scientific sources	1	Additional citation
Total number of citations	6	Corresponding to 80 points

The scientific and publishing activities of Dr. Kalinov are distinguished by their thematic integrity and internal logic. Several leading areas can be distinguished: robotic and minimally invasive surgery, colorectal cancer surgery, pancreatic surgery, translational and morphological research, and surgical education. This thematic organisation is particularly valuable because it shows that the candidate does not publish randomly and fragmentarily, but builds a recognisable scientific profile.

Several publications that are highly representative of the candidate's scientific research stand out in the summaries of scientific works presented. The study on the learning curve in robotic rectal surgery is of practical importance as it defines a competence threshold of around 28 cases and shows that the inclusion of ICG fluorescent perfusion assessment is associated with improved surgical outcomes and no anastomotic leaks in the relevant group. This contributes to both quality control and standardisation of training in robotic colorectal surgery.

The publication on robot-assisted multi-quadrant surgery – total proctocolectomy and abdominoperineal resection with the da Vinci Xi platform in familial adenomatous polyposis with rectal carcinoma – also makes a significant impression. Here, the contribution is twofold: on the one hand, it demonstrates the feasibility and safety of highly specialised robotic intervention, and on the other, it shows methodological maturity in the planning of complex multi-quadrant resections. This is an indicator of real participation in the contemporary development of high-tech colorectal surgery.

To this should be added the works with a morphological and translational focus, such as the modified CUBIC-based technique for 3D visualisation of human colon tissue, as well as studies on plasma biomarkers in colorectal carcinoma. They show that the candidate's interests are not limited to surgical techniques, but also cover the biological basis of surgical oncology. This is precisely the hallmark of the modern academic

surgeon – the ability to think clinically, technologically and biomedically at the same time.

IV. HABILITATION THESIS – MONOGRAPHY

The candidate's main habilitation thesis is the monograph **"Complex modern treatment and surgical approaches to pancreatic cancer"**, presented in a detailed 22-page summary. In the introduction, the author states a clear conceptual position: pancreatic carcinoma should not be viewed as an isolated surgical problem, but as a systemic disease that requires an integrated response – from early diagnosis and staging to personalised therapeutic choices. It is this conceptual framework that gives the work its academic weight and distinguishes it from a simple review text.

In the first substantive section, the author develops the epidemiological and socio-medical framework of the disease. The emphasis is placed not only on the increasing incidence and poor survival rates, but also on the structural causes of this – the lack of effective screening, late diagnosis, limited resectability at the time of diagnosis, as well as socio- economic and behavioural risk factors. What is valuable here is that the statistical and epidemiological data are not presented mechanically, but are used as an argument for the need for organisational changes and the creation of a system for early referral of high-risk patients.

In the next chapter, devoted to the anatomical and pathobiological basis, the work moves from a macroanatomical to a molecular perspective. The analysis of blood supply, lymphatic drainage, retroperitoneal relationships and proximity to large vessels provides the necessary surgical basis. Importantly, this classical anatomical framework is complemented by a review of molecular pathogenesis – KRAS, TP53, SMAD4, CDKN2A, BRCA1/2, PALB2 – and a discussion of the tumour microenvironment. This is precisely where the strength of the monograph lies: it establishes a link between anatomy, biology and therapeutic strategy. The author does not present the molecular data as an end in itself, but as the basis for a personalised approach.

The section on the diagnostic algorithm is among the strongest in the work. It systematises clinical assessment, laboratory markers, MDCT, MRI, EUS with FNA/FNB, as well as new molecular approaches – liquid biopsy, ctDNA, exosomes and microRNA. Of particular importance is the analytical approach to the role of artificial intelligence in diagnostic imaging, presented not as a hypothetical future, but as an already emerging tool for increasing diagnostic sensitivity. The author arrives at his own practical proposal for an integrated diagnostic protocol, including triage echography, highly specialised MDCT with a pancreatic protocol, EUS with histological verification and molecular profiling in familial cases. This is a significant scientific and practical contribution.

The surgical part of the monograph is structured convincingly and with a sense of hierarchy of problems. The classification of resectability, based on the ISGPS and NCCN

consensuses, is used as a starting point for discussing the surgical strategy. Classic resection procedures are considered: Whipple's operation, pylorus-preserving pancreatoduodenectomy, distal and total pancreatectomy—not only as technical options, but as different solutions depending on the location, vascular involvement, oncological goal, and metabolic consequences. It is also important that the author includes a critical assessment of the results from leading centres and identifies R0 resection as a central prognostic factor.

The section on systemic treatment and multimodal concepts is particularly valuable because it demonstrates the author's ability to think beyond surgical technique. Neoadjuvant and adjuvant regimens are analysed, including data from PREOPANC, Alliance A021501 and PRODIGE 24/CCTG PA.6, as well as the role of PARP inhibitors and immunotherapy in selected molecular subgroups. 's monograph thus provides an accurate picture of contemporary pancreatic oncology as a field of integrated treatment rather than surgical isolationism.

The chapter devoted to innovative trends – minimally invasive and robotic pancreatic surgery, artificial intelligence, molecular profiling – is also excellent. It is not only informative but also conceptual in nature. In it, the surgeon is thought of as part of a technological-intellectual environment, rather than as an independently acting operator. This gives the work a special style and makes it more mature than a standard literary review.

The section on the Bulgarian context is particularly important. There, the author argues for the need for structural reform through a national register, a network of certified centres, the development of training and simulation programmes, and functioning multidisciplinary councils. This section has significant practical value because it transfers scientific logic to healthcare organisation and makes the monograph relevant to national practice.

In the section devoted to the author's contributions, the monograph systematises its own scientific-analytical and methodological-practical results: a synthesis of contemporary approaches, the construction of a comprehensive treatment model, a structured diagnostic algorithm, a conceptual bridge between biology and surgery, a modified classification of resectability, and a practical protocol for multidisciplinary decision-making. This demonstrates the internal completeness of the work and the author's clear position.

The literature review in the monograph is extensive, contemporary and well organised. The summary clearly shows that it is based on a systematic analysis of publications and meta-analyses from the last decade and is not limited to passive data transfer. The author compares results, derives algorithms, seeks practical applicability and adapts the conclusions to the Bulgarian clinical environment. This is an essential quality because it turns the literature review into an analytical tool rather than a decorative part of the monograph.

V. INTERNATIONAL SCIENTIFIC ACTIVITY

The candidate's international activity deserves special attention. The list of participations presented shows a consistent and thematically relevant presence in international forums and practical training courses. As early as 2017, participation in RAES in Bucharest testified to an early orientation towards minimally invasive and robotic surgery. Subsequently, participation in the Annual ACS Surgical Simulation Summit in Chicago in 2019 is logically linked to his later scientific work in the field of simulation training and virtual reality.

Particularly important for the formation of his profile as an HPB surgeon are his theoretical and practical qualifications in transplant surgery at MHH, Hanover, Germany, in March 2022, as well as the advanced course "New Perspectives in HPB Surgery" at IRCAD Strasbourg in October 2022. These two training courses are particularly important as they guide the candidate's professional development towards hepatobiliary and pancreatic surgery in its most high-tech form. His CV further confirms his participation in liver resections, liver and kidney transplants, Whipple procedures and other digestive surgery operations, which shows that his international training was not merely formal, but truly integrated into his clinical development.

His certification as a console surgeon for da Vinci Xi in London in April 2024 is a particularly significant milestone. It represents not just a short course, but confirmation of technological training in the use of one of the most important robotic platforms in modern surgery. When this fact is combined with his publications in the field of robotic colorectal surgery and training in robotic surgery, it is clear that the candidate is not only a user of the technology, but also an active analyst and teacher.

Participation in Minimally Invasive Surgery Week 2024 in Florida, as well as in international scientific meetings such as RAES–ES International Joint Meeting and ICERI 2023, demonstrates a desire to maintain a broad international horizon – clinical, technological and educational. This is important because the modern academic surgeon should develop not only in a national but also in an international context.

VI. TEACHING
Senior Assistant Professor Kalinov actively participates in the training of medical students conducting practical exercises and participating in clinical training. His contribution to the development of simulation training in laparoscopic and robotic surgery.

VII. CRITICAL REMARKS

The candidate's scientific output demonstrates good scientific activity. In the future, the development of his scientific activity could be directed towards **larger clinical series and multicentre studies**, which would allow for an even broader generalisation of clinical results.

VIII. CONCLUSION

After analysing the presented scientific papers, monographic work, teaching activity and clinical practice, I believe that **Dr. Turgay Turgay Kalinov, PhD,** is an accomplished clinician and young scientist with active scientific and teaching activity. The scientific papers and the habilitation thesis presented show that the candidate **meets the requirements for the academic position of Associate Professor in Surgery**.

For the reasons stated above, I give **a positive review** and propose that the Scientific Jury select **Senior Assistant Professor Dr. Turgay Turgay Kalinov, PhD,** as **Associate Professor of Surgery**.

Date: 10 March 2026
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