

To: Department of Career Development
Medical University – Varna

REVIEW

of Assoc. Prof. Vasil Markov Bozhkov, MD, PhD, DSc

In connection with the announced competition for the Academic position of **"Professor"**, field of higher education 7. "Health and Sports" in the professional field 7.1. **Medicine** and scientific specialty **"Surgery"** for the needs of the **Department of Surgical Diseases**, the Faculty of Medicine, 2nd Clinic of Surgery at the University Hospital "St. Marina"- EAD, M U – Varna.

by Prof. Rossen Evgeniev Madjov, MD, PhD, DSc
Second Clinic of Surgery, University Hospital "St. Marina" - Varna
Department of Surgical Diseases, M U – Varna

1. Details of the procedure:

Following the decision of the Faculty of Medicine and the Academic Council of MU-Varna, the competition for Academic position **"Professor"** in the specialty **"Surgery"**, Professional field 7.1. **Medicine**, field of higher education 7. Health and Sports, was announced in D V – No. 101 / 29.11.2024.

By decision of the Faculty of Medicine and Order of the Rector of MU-Varna No. R-109-104 of 29.01.2025, I am appointed as an internal member of the Scientific Jury for MU-Varna.

According to Protocol No. 1 of 07.02.2025 of a meeting of the Scientific Jury, I am appointed to prepare an official scientific review.

Only one candidate has submitted the documents for participation in the competition for AP **"Professor"** – Assoc. Prof. Vasil M. Bozhkov, MD, PhD, DSc

I received all the necessary documents for the preparation of the review.

My review is in accordance with the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for its implementation, and the Regulations of the Medical University – Varna.

2. Professional data of the candidate:

Dr. Vasil Markov Bozhkov was born on 13.07.1973.

He graduated in medicine with excellent results from the Medical University - Varna in 1998 - Diploma No 6851/1998.

1999 - 2004 - Surgery resident, 2nd Clinic of Surgery.

2002 - Surgeon at the 2nd Clinic of Surgery, Univ. Hospital "St. Marina" - Varna

2007 - elected as an assistant, **2011** - senior and **2013** - chief assistant at the Department of Surgical Diseases, Medical University - Varna.

2004 - acquired a specialty in *surgery*.

2013 - defended his dissertation at the Medical University - Varna, for which he was awarded the degree of *Doctor* (No 039/17.05.2013.), in the scientific specialty **03.01.37** – "*General Surgery*".

2015 - *Associate Professor* of Surgery at the Department of Surgical Diseases, MU-Varna- (Diploma No82/18.12.2015)

2016 - Head of the Educational center abdominal surgery at the Department of Surgical Disease, Medical University - Varna

2024 - successfully defended a dissertation for the acquisition of the scientific degree "*Doctor of Science*" - *DSc*.

2024 - publishes a monographic work "*Malignant tumors of the small intestine*" ISBN 978-619-91772-6-6; ed. PClinik 2024; 177 pp.; reviewed.

2024 – Head of the Department of Surgical Diseases, MU-Varna

Assoc. Prof. Vasil Bozhkov has numerous postgraduate qualifications and courses in leading European centers:

2001 - Hôpital Erasme Bruxelles, Chirurgie digestive

2017 - Chirurgia Generale e del Pancreas Policlinico "G.B. Rossi" Verona Italy

2017 - 11-th European digestive surgery postgraduate course Budapest, Hungary

2017 - Laparoscopic suturing course Herceghalom, Hungary.

2020 - Department of Colorectal Surgery, Beaujon Hospital, Clichy, and University of Paris, France

2023 - Global Surgeon Summit Third Convention of Surgery Meril Academy, Gujarat, India

2023 - IASGO Pre-congress course - IOUS & ablations in liver tumors. Verona, Italy

2024 - Basic skills in laparoscopic surgery 23-25.09. Surgical training institute Bucharest, Romania

Assoc. Prof. Vasil Bozhkov, MD, PhD, DSc. is a member of:

- Deputy Chairman and Member of the Board of the Bulgarian Surgical Society.
- Since 2012 is a member of IASGO (International Association of Surgeons, Gastroenterologists and Oncologists).
- Member of the Editorial board Sc. Journal "Surgery"
- Union of Scientists in Bulgaria – Varna
- Member of Bulgarian Medical Association /BLS/

Assoc. Prof. V. Bozhkov is fluent in written and spoken – French, English and Russian.

3. Assessment of quantitative and qualitative scientific indicators:

Scientometric Indicators (for the competition for AP "**Professor**")

- Dissertation for PhD - 1
- Dissertation for Doctor of Medical Sciences - 1
- Habilitation Work - 1
- Publications in Refereed and Indexed
in a world-famous database of scientific journals - 16
- Publications in non-refereed scientific journals - 18
- Participation in world and international congresses - 25
- Participation in national congresses and conferences - 25

i.e. **total 87**

Dr. V. Bozhkov has defended his dissertation "*Diagnostic and Therapeutic Strategy in Patients with Cholangitis*", Medical University – Varna, for which he was awarded a **Diploma for MD** (No 039/17.05.2013.), in the scientific specialty **03.01.37 – "General Surgery"**.

Assoc. Prof. V. Bozhkov successfully defended his dissertation "*Post-cholecystectomy syndrome - an up-to-date view of an "old" problem. Diagnostics and Modern Therapeutic Strategy*" for the acquisition of the **Doctor of Science degree**. /Diploma No 637 of 21.05.2024/. The dissertation has been evaluated on its merits by the official reviewers and has a pronounced weight and level, has a scientific and scientifically applied nature.

From all the **37** publications of Assoc. Prof. V. Bozhkov for the participation in the competition, the distribution is:

- independent author - **3** (8,10 %)
- first author - **9** (24.33 %)
- second author - **11** (29,73 %)
- third/consecutive - **14** (37.84 %)

Publications in international medical journals are in:

Surgery, Gastroenterology and Oncology; Surgical Endoscopy; International Case Reports Journal; International Clinical and Medical Case Reports Journal; International Journal of Gastroenterology; Journal of IMAB– Annual Proceeding Scientific Papers; Trakia Journal of Sciences, which is important and contributes to the popularization of the achievements of Bulgarian surgeons around the world.

The results of the candidate's research activities have been reported at **45** scientific forums in Bulgaria and abroad.

4. Compliance with minimum national scientific requirements

According to the data from the Academic Reference of Assoc. Prof. Vasil Bozhkov, MD, PhD, DSc. prepared by the Library of MU – Varna / No. 25 of 20.01.2025/ and the compliance in accordance with the minimum national criteria in District 7. Health and Sports, *Professional field 7.1 Medicine – Medical and Clinical Field* – The total number of points for all indicators of the presented report significantly exceeds the criteria.

Sixteen (50%) of the scientific publications to meet the minimum national requirements for AP "**Professor**" are indexed in world databases (Scopus, Web of Science) (Y7.1-D7.16) – **353.57 points** / with minimum requirements of **80** points for clinical disciplines/, and 16 are in non-refereed journals with scientific peer review (G8.1-D8.16) **126.9 points**. with a total number of points of **480.47 points**, with a mandatory minimum for MU-Varna – **200 points**.

Citation:

The citations reflecting the scientific activity of the candidate for "**Professor**" according to the reference from the Medical Library /indicator **D 10-12** - with a list of citations of the works of Dr. Vasil Bozhkov/ are **31 / 330** points.

The presented scientific production is absolutely sufficient in volume for participation in the competition and meets the criteria adopted at MU - Varna.

Main topics are in the field of: biliary-hepatic and pancreatic surgery, diseases of the gastrointestinal tract, emergency surgery, gastric surgery, melanoma, neuro-endocrine tumors, which corresponds to the main activity in the clinic where the candidate works, have a predominant weight.

5. Evaluation of the contributions to the scientific, applied and therapeutic activities:

The results of the research activity of Assoc. Prof. V. Bozhkov, MD, PhD, DSc, have a pronounced scientific and applied character. The main directions in its diverse activities can be divided into several areas:

Diseases of the hepatobiliary system:

- ***Features of acute cholecystitis and mortality after cholecystectomy in adult patients (G7.16)*** The subject of the study was a total of 45 patients with acute cholecystitis, with an average age of 71.50 ± 7.02 years (between 60 and 88 years), admitted in emergency and operated on in the 2nd Clinic of surgery. An analysis of a constellation of indicators characterizing some of the important specifics of the diagnosis and treatment of these patients, with an emphasis on the role of GPs in increasing the efficiency and improving the quality of medical care for this specific contingent.

- ***Modern diagnostic and therapeutic approach in patients with biliodigestive fistulas and biliary ileus (G8.5)***. The diagnosis and methods of treatment in patients with bilio-digestive fistulas (BDF) and biliary ileus have been studied, with a view to improving post-operative results and reducing morbidity and mortality of this group of patients. The results in 26 pts have been analyzed. BDF and biliary ileus are a serious geriatric problem of modern biliary surgery, most often in the order of emergency. The main cause of BDF is cholelithiasis combined with destructive inflammatory process. Preoperative diagnosis remains very difficult due to the lack of specific clinical and laboratory indicators. The type of surgical intervention should be strictly individualized – depending on the etiology, localization of the fistula and the degree of alteration of the organs involved in its formation.

- ***Postcholecystectomy syndrome – a new challenge for the general practitioner (G7.5)*** - The increase in the number of laparoscopic cholecystectomies worldwide has led to an increase in the number of patients with PCS, which requires

a new approach to this problem. The most common biliary manifestations of PCS are: biliary damage pathways and biliomas or choledocholithiasis, subtotal cholecystectomy and ductus cysticus remnant. 262 patients with postcholecystectomy syndrome admitted in the clinic were analyzed. The reasons for PCS are BDI - 75; residual choledocholithiasis - 64; stenosing papillitis - 12; pyogenic liver abscess - 5; d. cysticus remnant - 4. The diagnosis and treatment of PCS requires multidisciplinary approach and should be carried out in centers specialized in the treatment of biliary pathology.

- ***Postcholecystectomy syndrome – diagnostic and therapeutic strategy (G7.6)*** - The aim of the article is to acquaint colleagues from general medical practice with modern diagnostic-therapeutic strategies and methods of treatment in patients with PCS and their role in optimizing the final results and reduction of complications and mortality in these patients. This presents the general practitioner with the challenge of knowing the underlying diseases that can lead to the development of PCS.

- Both publications are directly related to the dissertation of Assoc. Prof. Dr. Bozhkov, *"Postcholecystectomy Syndrome - An Up-to-Date View of an "Old" Problem. Diagnostics and Modern Therapeutic Strategy."* In this work, a detailed analysis of the causes leading to the development of postcholecystectomy syndrome, the experience of the 2nd Clinic of surgery in the treatment of patients with this syndrome is carried out.

- ***Antimicrobial treatment for intra-abdominal abscesses. (G7.13)*** - The social and economic importance of intra-abdominal abscesses is measured by the significant burden of health resources they require in terms of the need for urgency, hospital admission, imaging and laboratory diagnostics, surgery (both initial and repeated interventions). In addition, ineffective initial empirical antimicrobial therapy can lead to significant increase in treatment costs.

- ***Treatment of patients with liver abscess (G7.14)*** Liver abscess and its complications are one of the most common problems in surgical practice. The results of treatment of 26 patients with liver abscess were analyzed. Ultrasound was used to determine the number, size and location of abscesses and for possible percutaneous aspiration. Three types of drainage techniques were used: percutaneous drainage under ultrasound or CT control, with or without catheter placement, (9 patients), surgical drainage (16 patients), and drainage by ERCP (1 patient).

Early diagnosis and treatment is a crucial step in the treatment of these patients. The correct choice of surgical tactics, good knowledge of the problem and anatomical features, as well as the presence of a highly qualified team are the main prerequisites for favorable therapeutic results.

- ***Complicated hepatic echinococcosis - postoperative bilirrhagia. Management. (G8.9)*** A 12-year period (2005-2017) with 121 hospitalized patients with complicated HE was analyzed. Bile leaks in the postoperative period were found in 5 patients, four men aged 25 to 62 years and a woman aged 15 years. performing an echinococectomy. In all of them, communication between the cyst and the biliary tree has been established. One of the patients had to undergo a relaparotomy.

Diseases of the small and large intestine

- ***Intestinal intussusception in adults (G7.12)*** is a rare disease that differs significantly in etiology from the same disease in children. In the elderly, it accounts for about 5% of all cases of intussusception and is the cause of about 1% of all patients with intestinal obstruction. In all pts primary resection and anastomosis was performed and in one - desinvagination. As for patients with intussusception of the colon: 12 patients underwent resection with primary anastomosis and 6 patients underwent resection with colostomy. Postoperative complications were found in 7 patients; early postoperative mortality in one patient. Surgical intervention – radical resection of the affected segment is preferable and is the only radical method, since in most cases the cause of intussusception is a malignant lesion.

- ***Neuroendocrine tumors of the colon and rectum (G7.4) and (G7.9)*** - A retrospective cohort study of patients diagnosed with NET was presented, who underwent surgical interventions in the 2nd Clinic of surgery in the period 2010-2022 in 32 patients (19 women and 13 men). The localizations of neuroendocrine tumors are: colon and rectum - 9 patients, small intestine - 6 patients, stomach - 4 patients, pancreas - 7 patients, adrenal glands - 2 patients, liver metastases - 4 patients. Histological type: neuroendocrine tumor - 27, insulinoma - 3, pheochromocytoma - 2. Highly differentiated rectal tumors (< 2 cm) are indicated for endoscopic resection. Tumors larger than 2 cm are available for surgical resection, with a higher risk of distant metastases. The best results in the treatment of NET are achieved in highly specialized centers, with the participation of endoscopists and surgeons.

- ***Metastatic ColoRectal Cancer, complicated with pyogenic liver abscess (G8.16)*** Four cases of metastatic CRC, with liver abscess are presented. The following procedures were performed: segmentectomy - 1; liver resection with right hemicolectomy - two; incision, biopsy and drainage – one, and percutaneous drainage – in one. Liver abscesses complicating neoplastic disease can be treated like those due to benign pathology - aspiration, drainage and antimicrobial therapy. Surgery should be performed in large (over 5 cm.) abscesses or/and CRC. The prognosis in those patients is not favourable because of the malignant process and high percentage of septic complications.

- ***Intestinal fistulas. (G8.7)*** Most intestinal fistulas (75-80%) occur as a complication of previous abdominal surgery. The spectrum ranges from a spontaneously closing colon fistula to a significantly secreting enterocutaneous fistula, requiring many months of intensive treatment, parenteral nutrition, and complex reconstructive surgery. The diagnosis was made using clinical symptoms, physical status and imaging studies (ultrasound, CT, MRI). Surgical treatment includes bowel resection followed by anastomosis, stoma removal and, in some cases, reconstruction of the abdominal wall with a canvas.

- ***Complicated diverticulosis of the colon. Diagnostic and therapeutic strategy. (G8.10)*** A retrospective analysis of 213 patients with colon diverticulosis was performed. Age and sex, demographics, disease severity, surgical outcomes: time to intervention, recovery passage, nutrition, duration of hospitalization, complications, repeated interventions and lethal outcome were analyzed by age and sex. Diverticulitis is classified as complicated or uncomplicated based on: computed tomography data, history, severity of clinical symptoms, and imaging data.

- ***Periappendicular abscesses (G8.11), (G8.12)*** Periappendicular abscesses belong to the group of complicated intra-abdominal infections. They are part of the non-visceral intra-abdominal Abscesses and are inherently local, limited forms of secondary peritonitis. 46 patients with periappendicular abscess hospitalized in the Clinic for the period from 2016-2020 were presented. The patients underwent appendectomy and drainage. According to the result of the microbiological examination, she underwent antimicrobial therapy with Cephalosporins – second and third generation, Carbapenems, Fluorquinolones and Metronidazole.

Herniology

- ***Choice of surgical method for treatment in patients with postoperative hernias (G8.12)*** Surgical treatment of post-operative hernias (incisional ventral hernias - IVH) remains a challenge in the present modern surgery with wide limits of documented recurrences, which, according to the literature, reach an incidence of up to 45%. The aim of the study is to summarize and analyze the results of the different approaches to the surgical treatment of postoperative hernias over a 5-year period. 281 patients were operated, of which 38 were with IVH. In the clinical characteristics of the electively operated patients, the leading ones were complaints of varying severity, discomfort or intermittent pain in the area of the defect, upper dyspeptic syndrome. Reconstructive operations on the anterior abdominal wall in postoperative ventral hernias significantly increase the quality of life. When choosing an operative technique, the surgeon should strive to individualize the approach, taking into account many factors related to the age and comorbidity of the patient, and his personal experience.

- ***Recurrent postoperative hernias (G8.12)*** Recurrent post-operative hernias are a common problem in modern surgical practice, occurring in up to 40% of cases after previous intervention, and the problem is related not only to the surgical technique and the prosthetic materials used, but also to many patient-related predisposing factors. For a 5-year period, 38 patients with RPH were operated on, and more than a third of the patients (14) were over 70 years old. The largest group of patients with recurrent postoperative hernias were after primary surgery of the biliary tract – 5 after LC; 5 - after open cholecystectomy and one after biliary peritonitis. The place of this type of reconstructive interventions, as a great challenge for the surgeon, is also confirmed by the finding that for 18% of the studied group this is another (>2) plastic surgery of the anterior abdominal wall. Reconstructive interventions of postoperative ventral hernias represent a significant and still debatable issue in modern herniology with serious medical, but also socioeconomic consequences. Patients with higher risk for recurrences are those with obesitas, poor control of blood glucose, excessive tissue defect and local complications developing in the early postoperative period.

6. Teaching activities:

According to the information provided by MU-Varna, Assoc. Prof. V. Bozhkov has a teaching experience of 17 years 11 months. and 17 days as of the date of submission of the documents. He lectures, conducts seminars and exercises with medical students, postgraduate students and doctoral students. Participates in examination commissions: medical students 3rd, 5th year; state-exam in surgery in 6th year; surgical residents; PhD students in surgery; recognition of a specialty in Surgery.

In addition, he trains postgraduate students, develops curricula and programs. He participates in academic, scientific and academic councils (member of the Faculty Council and the Academic Council of MU-Varna), provides methodological assistance to peripheral medical hospital and institutions.

The workload of Assoc. Prof. Dr. Vasil Bozhkov, according to the submitted certificate (No. 112-6 of 13.01.2025.) by the Academic Department of MU-Varna is:

School Year	BG Lectures	EL Lectures	BG exercises	EL exercises	Total occupancy
2020 - 2021	20 t. h.	4 t. h.	146 t. h.	450 t. h.	620 t. h.
2021 - 2022	24 t. h.	4 t. h.	42 t. h.	326 t. h.	396 t. h.
2022 - 2023	12 t. h.	24 t. h.	0	351 t. h.	387 t. h.
2023 - 2024	94 t. h.	48 t. h.	0	360 t. h.	502 t. h.

i.e. his workload meets all the criteria and is quite sufficient in the context of his participation in the current competition for AP "**Professor**".

7. Treatment and diagnostic activity:

Dr. Vasil Bozhkov is an *Associate professor*. He is Head of the Department of Surgical diseases, Medical Faculty of Medical University – Varna, with a permanent workplace at the 2nd Clinic of surgery, University Hospital "St. Marina".

On the basis of an extract from the list of operations, a report on the operational activity of Assoc. prof. Dr. V. Bozhkov for the period 2022-2025 has been prepared. - a total of **1 017** surgical interventions, of which **318** as an operator. The analysis shows that Assoc. prof. V. Bozhkov has performed mainly surgical interventions with large /361/ and very large volume /89/ of complexity.

Conclusion:

Assoc. prof. Vasil M. Bozhkov, MD, PhD, DSc. is an established surgeon and lecturer, with experience (25 years of experience in the specialty) in elective and emergency surgery. Important practical and scientific contributions are derived from his scientific works on the basis of long-term material from patients diagnosed and treated personally by him, surgical methods introduced, algorithms for diagnosis and therapeutic behavior developed.

As Head of the Department of Surgical diseases of the Faculty of Medicine, at the Medical University he organizes and manages the preparation, adoption and approval of curricula and programs. He has experience in the management of medical activities. Organizes and controls the conduct of educational activities in the Department and labor discipline. Monitors and actively supports the professional development of the academic staff and all medical staff. There are trainees and postgraduates under his leadership.

All the above facts from the professional biography, scientific production, diagnostic-therapeutic and teaching-teaching activities of Assoc. prof. Dr. Vasil Markov Bozhkov, fully compliant with the legal requirements in the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for its Application, as well as the Regulations of the Medical University - Varna, give me a sufficiently categorical reason to recommend to the members of the Scientific Jury to vote *positively* and to be awarded the AP "**Professor**" the scientific specialty "**Surgery**" for the needs of the Department of Surgical diseases of the Medical Faculty at MU - Varna, on the clinical basis of the Second Clinic of surgery at the University Hospital "St. Marina" - Varna.

31.03.2025

Varna

Reviewer:

Prof. Rossen Madjov, MD, PhD, DSc

