

To the Chairman of the Scientific Jury,
determined by Order No. 11-07-27/18.04.2024
of the Executive Director and Procurator of
“Acibadem City Clinic UMBAL” EAD, Sofia

REVIEW

By Associate Professor Dr. Petko Karagyozev, MD, PhD, FASGE, Head of Clinic of Gastroenterology, Acibadem City Clinic University Hospital Tokuda, Sofia

RE: Competition for the academic position “Associate Professor” in the field of scientific specialty “Gastroenterology” for the needs of the Clinic of Gastroenterology, “Acibadem City Clinic UMBAL” EAD

There was one candidate in the competition – Dr. Ani Agop Chavoushian, MD, PhD, physician at the Clinic of Gastroenterology, “Acibadem City Clinic UMBAL” EAD, Sofia.

Dr. Ani Chavoushian was born on 02.12.1967. She graduated in Medicine from Medical Academy in 1994, Sofia. She specialized in Internal Medicine through 1995-1999, also at the MA, Sofia. In 1999 she acquired the specialty Internal Medicine. During the period 1999-2003 she specialized in Gastroenterology and worked at the Clinic of Gastroenterology at the 5-th MHAT, Sofia. In 2003 she acquired the specialty Gastroenterology. During the period 2007-2019 she met all the requirements for qualification by attending several courses at the UMHAT “Tsaritsa Yoanna – ISUL” and after she passed successfully the exams she acquired all qualification levels in the field of abdominal and interventional ultrasonography. She also attended qualification courses in gastrointestinal endoscopy during the same period and acquired first and second level in “Diagnostic and therapeutic upper and lower endoscopy”. In 2020 Dr. Ani Chavoushian was awarded the educational and scientific degree “Doctor” in Internal Medicine after the successful defence of dissertation thesis entitled “Diverticulosis and colonic diverticular disease – pathogenetic mechanisms and clinical aspects”.

During the period 1999-2006 Dr. Ani Chavoushian worked as resident physician at the Clinic of Gastroenterology, 5-th MHAT, Sofia. During 2006-2012 she worked at the Department of Internal Medicine, MHAT “Tokuda”, Sofia. I have the honour to have met her through that period and also the opportunity to obtain impressions of her professionalism and her personal qualities.

The additional qualifications of the candidate are quite impressive. She acquired them at leading clinics in Western Europe during the period 2019-2023. She completed with success three consecutive training modules in transabdominal intestinal ultrasonography at leading centres in Germany and Denmark and became the first trainer in intestinal ultrasonography in this country. This is an innovative methodology and it complements her high expertise in the field of intestinal pathology and chronic inflammatory bowel diseases. Dr. Ani Chavoushian is one of the leading national experts in the field of diagnosis and therapy of ulcerative colitis and Crohn’s disease and to best of my knowledge Dr. Chavoushian is the first certified trainer in transabdominal intestinal ultrasonography in this country.

Another important milestone of the professional biography of the candidate is the one-month specialization in gastroenterology in the Netherlands in 2001.

Along with her many years as clinician, internist and gastroenterologist, Dr. Chavoushian passes on her expertise and qualifications by teaching to medical students. She is a part-time lecturer at the Faculty of Medicine of the Sofia University "St. Kliment Ohridski" and has conducted exercises in Propedeutics of Internal Medicine since 2019. The reference for academic workload makes it clear that in the academic year 2019/2020 the candidate had 180 contact hours, in 2020/2021 – 135 contact hours, in 2021/2022 – 90 contact hours and in the 2022/2023 academic year – 180 contact hours.

Dr. Chavoushian is fluent in English, Armenian and Russian, and she is a member of a number of national and international prestigious professional organizations – ECCO, ESGE, EFSUMB, IBUS group, BAUM, BASGO, Bulgarian Scientific Society of Gastroenterology, Gastrointestinal Endoscopy and Abdominal Ultrasonography.

The candidate partakes in the competition with 21 full-text publications and 29 abstracts from contributions to conferences and congresses and presents a monograph and a dissertation thesis with the respective abstract. Dr. Ani Chavoushian is the first author in some 50% of these papers. Of the 21 full-text publications, two have been published in scientific journals, and have been referred to and indexed in world-renowned databases of scientific information. Also, nine quotations have been presented – all of them in journals in English.

I. Full-text publications:

The scientific output of the candidate actually covers all sphere of gastroenterology and hepatology. Several paths can be outlined:

1. Hepatology

Dr. Chavoushian participated in the elaboration of the national consensus for diagnosis and treatment of chronic liver diseases, and this comes to confirm and reaffirm her national level expertise. She participated in the elaboration of national algorithms for behaviour in chronic viral hepatitis, Wilson's disease, autoimmune liver diseases, toxic hepatitis, idiopathic hemochromatosis, porphyria. Along with other leading national experts she elaborated the national consensus for behaviour in complications of liver cirrhosis – portal hypertension, varices, ascites, refractory ascites, spontaneous bacterial peritonitis, hepatic encephalopathy, primary liver carcinoma in 2002. Her participation in elaboration of the national rules of behaviour in the above nosological units comes to prove her high expertise in the field of liver diseases and the complications thereof. This was the first elaboration in this country of consensus for behaviour in chronic liver diseases and complications related to decompensated liver disease. Together with other leading specialists in the field the candidate has defined diagnosis criteria, treatment indications, an algorithm for evaluation of therapeutic response and follow-up. The content is highly useful in the day-to-day practice of every internist and gastroenterologist.

Another publication, where the candidate is a co-author, provides a detailed discussion of the hepatoprotective and choleric properties of the Cinnarix preparation. A publication in "Bulgarian Hepatogastroenterology" presents the results of own pilot study of anti-viral treatment of patients with Hepatitis C, treated with Methadone or Revia.

2. Diseases of the small and large intestine.

2.1 Celiac disease – in a publication in 2006 the candidate discusses the modern etiopathogenetic concepts and treatment strategies.

2.2 Casuistic conditions – publications of rare clinical cases of endometriosis of the ileum and the appendix, giant diverticulum of the colon, mesenterial cysts.

- 2.3 Diverticulosis and colonic diverticular disease – the candidate is an undisputed expert in this field. This topic has been treated in detail in the dissertation paper and in the monograph. Dr. Chavoushian has several publications on acute diverticulitis, fistulas and diverticular disease, sepsis in diverticulitis, published in prestigious national medical journals, which present in detail the disease and the eventual complications, and provide important practical guidance to avoid delay of diagnosis and for timely implementation of the most appropriate treatment strategies. Also, the undeniable role of a multidisciplinary team has been emphasized, especially for the treatment of colon fistulas, surgical diverticulitis and sepsis.
- 2.4 Intestinal ultrasonography – a sphere where the candidate is an undisputed leader on a national scale and the first certified trainer in the methodology. Several publications discuss in detail the role of abdominal ultrasound for diagnosis of chronic inflammatory bowel diseases, diverticulosis and complications.
- 2.5 Chronic inflammatory bowel diseases – a review article co-authored with leading national experts provides a discussion of the role of Azathioprine in the therapy of IBD. Various regimens for administration of Budesonide for treatment of Crohn's disease have been analysed in connection with participation in an international multi-centre randomized study.
- 2.6 Colorectal carcinoma – Presentation of the experience of the centre, where the candidate works, in the fields of diagnosis, staging and treatment of colorectal carcinoma – one publication on this problem.

II. Participation in congresses and conferences:

Dr. Chavoushian partakes in the competition with 29 abstracts from national and international congresses and conferences. Her participation in prestigious international events is impressive with posters and oral presentations – Falk Symposia, UEG Week, etc. She has numerous participations, the author treats issues such as complicated forms of chronic inflammatory bowel diseases, ultrasound diagnosis and follow-up of patients with celiac disease, manifestations in joints and extraintestinal manifestations of IBD, thrombotic complications in IBD, IBD and pregnancy, portal thrombosis, etc. The candidate has also published scientific papers on rare genetic mutations associated with diverticulosis of the colon and the complications thereof. There are also first ever tests and analyses of the Bulgarian population for genetic markers of the diverticular disease and the complications thereof. Dr. Chavoushian also has almost annual participations with co-authored presentations at the annual BAUM congresses, on important topics such as malignant processes in the abdomen, cystic malignant tumors of the liver, secondary lesions, the role of the contrast ultrasonography for diagnosis of hepatic and extrahepatic disease processes, etc.

III. Monograph – the candidate has presented a monograph entitled “The Known and Unknown Diverticulosis and Colonic Diverticular Disease”, which I had the honour to review and to familiarize myself in detail with its contents. The monograph examines in detail a frequent problem of great medical importance which at the same time is rather underestimated, that is diverticulosis and colonic diverticular disease. The paper comprises 11 sections, providing consistent, thorough and contemporary examination and definition of terms associated with the problem, frequency and prevalence, risk factors, diagnostic tests, available classifications, clinical manifestations and associated diseases. A separate section is dedicated to the

social and economic aspects of the problem. As one of the most frequent anatomical changes and findings in colonoscopy, diverticulosis is also one of the most frequent causes of complications and disease states such as acute diverticulitis and acute (sometimes life-threatening) bleeding in the lower gastrointestinal tract. The monograph combines the most up-to-date scientific achievements in the field, the extensive clinical experience of the author and purely practical recommendations, and provides important reading material for both students and postgraduates, as well as for daily practicing gastroenterologists, offering valuable advice of purely practical nature. The author points out in the introduction the importance of the problem, the high frequency of occurrence, the uncertainties related to the pathogenesis, the lack of clear definitions, the disputes over therapy strategies and the follow-up regimens. The following sections unify the terminology, provide modern data about frequency and prevalence, the risk and predisposing factors, the modern concept of pathogenesis. Further to the indisputable role of lower endoscopy for diagnosing of uncomplicated diverticulosis and emergency colonoscopy in cases of acute hemorrhagia, the author introduces us in detail to intestinal ultrasound as a diagnostic method, for detection of complications and possibility to monitor the evolution of the disease, and a mode for evaluation and monitoring of therapeutic response, which is one of the undisputed merits of the monograph, demonstrating the in-depth knowledge of the author and her expertise in the art. Another section with undisputed merits is "Clinical Manifestations". It makes clear distinction between diverticulosis and diverticular disease and examines in detail the various aspects of the latter. The manifestations of diverticular disease abundantly illustrated with clinical cases from the author's practice, which renders this paper even more valuable and beneficial to the clinical practice. The manifestations of diverticular disease are examined in succession – acute diverticulitis, chronic forms, segment colitis associated with diverticulosis, as well as the symptomatic uncomplicated diverticulosis. Attention has been also paid to rare conditions such as giant diverticulum of the colon, etc. The author provides clear algorithms for behaviour under circumstances of acute diverticulitis and acute hemorrhagia caused by colon diverticula, which once again reaffirms the importance of the monograph for day-to-day clinical practice. It is worthwhile to note the last section – "Social and Economic Aspects", where the author proves the social and economic burden of diverticulosis in its various forms of occurrence and the progressive growth of the costs for treatment, inclusive of surgery, absence from work and paid sick leave, due to the fact that the diverticular disease quite often affects a comparatively young and active part of society, which also determines its large social and economic burden.

IV. Dissertation thesis.

The candidate has presented a dissertation thesis entitled "Diverticulosis and colonic diverticular disease – pathogenetic mechanisms and clinical aspects".

The dissertation thesis possesses undisputed merits and high scientific value. The conclusions of the candidate are beneficial for the day-to-day clinical practice of every practicing gastroenterologist and come to prove the undisputed expertise of Dr. Chavoushian on the subject. A retrospective study of 453 patients has been carried out, who have been diagnosed and treated by the author in person throughout the period 2013-2018. Intestinal dysmotility, predisposition to herniosis and advanced age have been proven to be risk factors for both the occurrence of colonic diverticulosis and for occurrence of complications. Also of practical importance is the evidence that lifestyle, smoking and overweight are not associated with increased risk. For the first time in this country the Bulgarian population has been surveyed for SNP rs7848647 in the

TNFSF15 gene. The mutation in question is examined as predictor of complications of diverticulosis. The patients with mutation have been compared to healthy controls and for the first time ever it has been proven that the existence of the mutation as a self-contained phenomenon does not increase the risk of surgical complications of diverticulosis. The author has established on the grounds of a detailed analysis that women under the age of 60 are at higher risk for development of acute diverticulitis, with severe course of the disease and imperative surgical treatment. Cases of chronic diverticulitis have also been analysed in detail. An algorithm for diagnosis and treatment has been suggested, as well as use of endoscopic score, adapted to the national specifics of gastroenterological practice. The social and economic analysis, which is a part of the scientific research, is of particular interest. Evidence has been provided for increase of the frequency of occurrence of the disease with concurrent growth of the costs of diagnosis and treatment. The thesis combines the extensive clinical experience of the author and the global achievements in the art. For the first time ever in this country genetic mutations associated with diverticulosis have been examined, risk factors have been defined and a social and economic analysis has been made.

The creative achievements and the applied scientific contributions of the candidate are undeniably of great importance for the development of gastroenterology in this country. Several paths can be outlined:

1. Elaboration of national consensus and algorithms in the field of hepatology – contribution to the first algorithms elaborated in this country for chronic viral hepatitis, toxic hepatitis, autoimmune liver diseases, liver cirrhosis, portal hypertension, varices of the esophagus, ascites, spontaneous bacterial peritonitis. The invitation and the participation in the expert groups come to prove the high expertise of the candidate on a national scale.
2. Development works in the field of colonic diverticulosis and the complications thereof – the candidate is an undisputed expert on this subject. The scientific works done by the candidate are pilot for this country and they have undisputed contribution to the national science. The publications on the subject are of the nature of recommendations and define an algorithm for diagnosis and treatment, introduction of endoscopic score, etc.
3. Chronic inflammatory bowel diseases – Crohn's disease and ulcerative colitis – the candidate is a nationally recognized expert. Apart from the research work in the field of immunomodulation, the author has a number of participations in national and international conferences with many scientific reports in this field. It is a well-known fact that the opinion of Dr. Chavoushian is sought and appreciated by the gastroenterologists in this country for the most complicated cases of IBD.
4. Intestinal ultrasonography – the candidate is a pioneer of this methodology in this country and the first internationally recognized certified trainer. She has been trained at leading centres in Europe and she has an impressive scientific output on the subject.
5. Guidelines for diagnosis and treatment of some rare diseases and conditions such as intestinal endometriosis, mesenteritis, mesenterial cysts, giant diverticulum of the colon.

Taking in consideration the serious theoretical and practical background of Dr. Ani Chavoushian, her teaching activity, the scientific publications and works, her multiple contributions as a lecturer and poster-presenter at prestigious congresses and conferences, which meet in full and even exceed the requirements set forth in the

LDASRB and the Rules of procedure for development of the academic staff of Acibadem City Clinic UMHAT, I propose to the Honourable Members of the Honourable Scientific Jury to vote with an affirmative vote to elect Dr. Ani Chavoushian, PhD, to the position of Associate Professor with the Clinic of Gastroenterology ACC UMHAT "Mladost". I have the honour to know the candidate in person and I am fully confident in her professional characteristics, her ethics, her high morale, as well as in her potential for academic and career advancement.

07.05.2024
Sofia

With respect:.....
Assoc. Prof. P. Karagyozov, MD, PhD, FASGE)

