REVIEW

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About: Competition for an **Associate Professor** academic position in the field of higher education **7.** Healthcare and Sport; professional sphere **7.1.** Medicine; in the scientific field of **Hygiene** (incl. labor, communal, school, radiation, etc.) for the needs of the Faculty of Public Health, Department of Hygiene and Epidemiology, and general hospital positions in the General Administration of St. Marina University Hospital, announced in State Gazette, issue 8/28.01.2020.

By a decision of the Faculty Council of the Faculty of Public Health at the Medical University of Varna, included in protocol № 149/19.03.2020, and by ordinance № P-109-178 from 03.06.2020 of the Rector of the Medical University of Varna, I was chosen as an internal member of the Scientific Jury (SJ) at a procedure of acquiring the academic position of Associate Professor at MU-Varna. At the first SJ meeting, I was assigned the task of preparing a review about the competition, where the sole candidate is **Lili Slavcheva Trifonova, MD, PhD**.

The documents I was presented were in compliance with the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) and the Regulations for its implementation and follow the requirements for the indicated position. No procedural breaches were established.

I declare that I have no conflict of interest in regard to the candidate.

I. SHORT BIOGRAPHICAL INFORMATION AND CAREER PATH

Dr. Lili Slavcheva Trifonova was born on 22.12.1963 in Popovo.

She graduated from the Higher Medical Institute – Varna in 1987. She started working as a district doctor in the Municipal Hospital in Targovishte, and later became an intern at intern at the Third Internal Department at the same hospital. From 01.10.1990 she is a clinical intern in Internal Diseases at the Presidium of the Medical Academy, with a training base at the Medical University of Varna.

Since November, 1992 until now, after winning a competition, she has been working as a dietician at St. Marina University Hospital, Varna.

In 2015 she became a part-time teaching assistant at the Department of Propedeutics of Internal Diseases, and since 2017, she has been a full-time teaching assistant at the Second Department of Internal Diseases, ES of Gastroenterology, Hepatology and Nutrition at MU-Varna.

In 1996, she acquired a specialty in Internal Diseases.

In 2004, she acquired a professional qualification in Health Management at the University of Economics – Varna.

In 2006, she acquired a specialty in Nutrition and Dietetics.

In 2018, after successfully defending her dissertation titled - Optimization of the Clinical Approach and Diet Therapy in Gluten Enteropathy, she received her PhD in Gastroenterology.

II. SCIENTIFIC WORK AND CONTRIBUTION

In 2018, after successfully defending her dissertation titled - Optimization of the Clinical Approach and Diet Therapy in Gluten Enteropathy, she received her PhD in Gastroenterology.

For her participation in the competition, Dr. Trifonova has presented the following scientific publications:

1. Total number of scientific publications

- dissertation - 1;
- dissertation summary - 1;
- publications presented for the acquisition of PhD - 3;
- monographs - 1;
- book on the basis of the dissertation - 1;
- articles in scientific journals included in the presented academic reference from MU-Varna with a reg. № 81/28.02.2020 - 19;
- other scientific publications not included in the academic reference - 12;
- textbooks - 2;
- proceedings and posters from national and international congresses and conferences - 21.

Out of all publications, **35** comply with the category of Scientific Work. I am excluding the dissertation and the dissertation summary, the publications presented when acquiring PhD, and the proceedings from various conferences.

Out of these publications, **32** are present in the digital reference from NACID as proof of fulfilling the minimum requirements for obtaining the academic position Associate Professor according to LDASRB from 2018.

- Full-text scientific publications in scientific journals, included and indexed in international databases - 5;
- Full-text publications in non-indexed journals with peer review - 26.

The presented by the candidate publications for participation in the competition, as a number and category, completely comply with the recommended criteria for the academic position Associate Professor accepted at MU-Varna.

2. Authorship:

Out of the presented 35 scientific publications, in 18 Dr. Trifonova is the sole or first author (51.43%), in 2 of the articles is a second author (5.71%), and third or subsequent author – in 15 publications, which represents 42.86% of the total number. This fact underscores the leading role of the candidate in the presented scientific works.

3. Citation number:

In the academic reference with a reg. № 121/24.03.2020 prepared by MU-Varna it is seen that Dr. Trifonova has been cited or reviewed **8 times**:

- citations in non-indexed journals with peer review – 6 citations, (D12);
- reviews in non-indexed journals with peer review – 2 reviews, (D10).

III. CHARACTERISTICS AND CONTRIBUTION OF THE SCIENTIFIC PUBLICATIONS

The scientific publications of Dr. Trifonova include the following fields:

1. Gluten enteropathy – clinical characteristics, pathogenetic mechanisms, diagnostic features, diet therapy, monitoring, and diet training of the patients (articles A1-1, G6-1)

2. Gluten-Related Disorders and Gluten-Free Diet. Modern Indications-B-3-1:

The author's monograph is the first handbook of its kind in our country, which encompasses all aspects of the gluten-related disorders. It shows thoroughly and knowledgeably the problems of the epidemiology and the wide spread of these disorders, including regions such as India, China, and Japan. There is a detailed presentation of the most recent views on the pathogenesis, genetic predisposition, clinical presentation, and the difficulties in the diagnosis and differentiation of gluten-related conditions. The book includes also the newest immunological markers with the aim of differentiating the similar and overlapping clinical presentations. The role of histomorphological testing is emphasized as still being the gold standard in the confirmation of the diagnosis in some of the conditions. The role of genetic testing is underscored – when to use them and in which cases to rely on them. The link between gluten enteropathy and other immune-mediated diseases is analyzed.

For the first time in Bulgaria, practical indications for adequate gluten-free diet are provided. Special attention is paid to the gluten-related disorders in childhood as well as an assessment of their nutrition status.

It also presents for the first time other disorders from the spectrum of gluten-related disorders, such as gluten sensitivity, wheat allergy, Baker's asthma, and different types of non-IgE-mediated allergic disorders, such as eosinophilic esophagitis, eosinophilic gastroenteritis, and colitis.

The book is the first to examine in detail a new member of the group of gluten-related disorders – gluten sensitivity (intolerance), its new pathogenetic mechanisms, and the role of other molecules, such as fermentable oligosaccharides, disaccharides, monosaccharides and polyols (FODMAPs), wheat amylase-trypsin inhibitors, wheat germ agglutinins, and exorphins, as possible "candidates" for disease triggers. The newest non-dietetic means and their pathogenetic mechanisms as possible future challenges in the treatment and management in gluten-related disorders are explored.

3. **Gluten Enteropathy. Scientific Data and Real Proof - G- 6-1:**

The book on the basis of the PhD dissertation presents the newest scientific facts related to the pathogenesis of one of the most widely spread autoimmune intestinal disorders, especially in adults, which is easily overlooked by clinicians. It is encountered more often than it seems and not always with the expected presentation. The total morbidity level is 1% of the general population of the world – similar to that of rheumatoid arthritis.

The role of the gut microbiota in the pathogenesis of gluten enteropathy is examined in presented in detail. Strategies for the identification of bacteria causing celiac disease are mapped out, which will provide the opportunity of modeling the gut microbiota as a therapeutic and preventive approach.

The book presents also the hematologic changes, which sometimes are the only presentation of the disease. The identification of these atypical presentations, including hematologic, is an important opportunity to increase the diagnostic frequency of gluten enteropathy, which currently is one of the most underestimated digestive disorders in the world.

The real proof included in this book is supported by the long-standing clinical experience and detailed study of the author of a relatively big group of patients – a total of 134, analyzed based on demographic, clinical and laboratory, immunologic, and histomorphologic indicators.

For the first time in Bulgaria, a thorough characterization of adult patients with gluten enteropathy is done.

For the first time, a complex approach for early diagnosis is suggested as well as strategies for a screening of patients in outpatient care.

For the first time, questionnaires for a survey of the nutritional status of the patients are developed. An assessment is done on the factors influencing the quality of life, and a diet strategy for monitoring, training, and educating patients with gluten enteropathy is developed.

4. **Gluten enteropathy and concomitant diseases (articles G 6; G 7-1, 7-4, 8-14, G 8-1, G8-2, G 8-14, G 8-15, G 8-16):**

The clinical spectrum of gluten enteropathy is extremely varied and the disease can affect many extra-intestinal organs and systems, including the liver. Liver dysfunction, which is observed in patients with gluten enteropathy, varies from asymptomatic increase of liver enzymes or non-specific reactive hepatitis (cryptogenic liver disorders) to chronic liver disease. Histological changes and liver enzymes are significantly positively affected by a gluten-free diet.

The article describes 8 patients following a gluten-free diet (GFD) for a period of 6 months. The liver enzyme levels decrease in all patients reaching normal values with a strict GFD. Practical and theoretical conclusions are drawn.

Clinicians and general practitioners are provided with clear practical indications in refractory hypertransaminasemia with the aim of drawing the attention to the diagnosis of gluten enteropathy in the absence of other causes of liver dysfunction.

5. **Pregnancy and gluten enteropathy (article G8-6):**

Reproductive disorders can be the first, and sometimes the only, symptoms of gluten enteropathy. The article presents the most frequent disorders during pregnancy – severe iron-deficiency anemia, spontaneous abortions, giving birth to children with lower birth weight and height. There is an analysis of the nutrition in the prenatal period and specific indications for a proper nutritional status during pregnancy and breastfeeding are provided. The author's personal experience is shared.

6. Gluten-free diet and its impact on the quality of life (article A-1, B-3, G-6, G7-3, G8-20, G8-22):

In the articles are selected and summarized some of the comments made by patients during their outpatient visits as an example of the most difficult situations they have encountered, their perceptions and worries are analyzed. For the first time in Bulgaria, strategies for overcoming

the deteriorated quality of life in these patients are suggested. The target therapeutic intervention by trained specialists is examined. The aim is to improve the adherence to GFD and increase the psychological wellbeing of patients with gluten enteropathy.

7. Chronic liver diseases with viral and non-viral etiology (articles G 14, 15, 16, 21):

Toxic Cholestatic Hepatitis Induced with Acitretin in a Patient with Psoriasis – a Case Report

The article draws conclusions related to the proper patient selection, careful assessment of the benefit/risk in patients treated with acitretin with the aim of monitoring aminotranspherases and cholestatic enzymes.

8. Antioxidants, diet, prevention:

The articles present a thorough study of scuba divers, subjected to increased resistance when breathing, low temperatures, high partial pressure of oxygen, and other physiological changes accompanying diving and provoking oxidative stress. There are recommendations for the inclusion of fresh fruits and vegetables in the daily menu of scuba divers in order to increase the antioxidant defense.

9. Enteral feeding, functional foods, problems when following a diet in hospitals (articles G 8-3, 8-4, 8-5, 8-10, 8-11):

The articles include a study of patients treated at St. Marina University Hospital in Varna for a period of 3 months and Queen Giovanna University Hospital in Sofia, for a period of 30-40 days, who were treated with wholegrain instant flours. A beneficial therapeutic effect was established, a lack of side effects, as well as incompatibility with the rest of the medical therapy.

A number of articles presents a detailed analysis of the most frequent diets on the basis of calculated chemical content and energy content. A questionnaire survey is conducted with 105 medical specialists studying the diet applied by them. The errors related to the quantity and variety of foods are indicated, as well as the insufficient inclusion of fruits and vegetables, which according to 75% of the respondents is mostly related to insufficient funding.

10. Chronic kidney diseases (CKDs), diagnostic criteria, diet regimens, assessment of the nutritional status and quality of life:

According to the most recent data, 8.7% of the global population suffers from CKDs with various etiology. Dialysis patients undergo a loss of amino acids, glucose, and vitamins. The oral administration of dietary supplements increases the possibilities for treating protein-energy malnutrition. An assessment of the nutritional status is made, diagnostic criteria and diet regimens are developed, and an assessment of the quality of life of patients undergoing kidney function replacement therapy is provided.

11. Digestive enzymes:

One of the articles (G8-8) offers a contemporary concept in regard to the content, structure and the role of digestive enzymes on human health. A detailed characterization of the enzymes is done, emphasizing their role in digestive processes.

12. A healthy diet as an alternative to the modern lifestyle:

The articles deal with the problems of overweight and obesity, as well as the increasing sedentary lifestyle among adolescents, developing concepts for overcoming it and offering specific diet regimens.

IV. TEACHING ACTIVITIES:

It is seen in the academic reference with a reg. № 112-48/11.02.2020 that Dr. Trifonova started her teaching career in October, 2015 as a part-time teaching assistant at the Department of Propedeutics of Internal Diseases, teaching third-year medical students. In 2017 she became a full-time teaching assistant at the Second Department of Internal Diseases, ES of Gastroenterology, Hepatology and Nutrition, teaching fifth-year medical students. Since October, 2017 she has been teaching a course in bromatology to assistant pharmacists, and in the winter term of 2019 she became a lecturer and examiner in the discipline Medical Nutrition – online training of nurses and midwives at the affiliates of the Medical University of Varna in Shumen, Veliko Tarnovo, and Sliven, with an average load of 260 classes, which exceeds the accepted norm of 220. Having in mind her participation in various seminars, in a lecture course in Gastroenterology and Hepatology for specializing physicians, as well as in a national scientific project, it can be concluded that Dr. Trifonova is a lecturer with high enough teaching load. She is also included in the preparation of curricula and tests, actively participating in exam commissions during term examinations.

Dr. Trifonova is also a lecturer in a highly specialized-activity course titled – Stem Cell Transplantation.

She has a certificate for Diagnostics and Treatment of Obesity.

Dr. Trifonova is a scientific consultant of Dr. Petar Petrov – a post-graduate in Second Department of Internal Diseases, ES of Nephology and Dialysis.

PRACTICAL ACTIVITIES:

As seen from Cert. № 564/07.02.2020, the candidate has a work experience of 32 years, 2 months, and 13 days. Dr. Lili Trifonova is a doctor with a long-standing practice and significant scientific results in the field of nutrition and dietetics, gastroenterology and hepatology, has actively been participating in the diagnostic and consultation activities at the Clinic of Gastroenterology, Hepatology and Nutrition from 1992 to the present moment. She is the first physician in Varna with more than 28 years of experience in clinical dietetics.

She has participated as a co-researcher in 4 clinical studies of drugs for the treatment of hepatitis B and follow-up of patents with cirrhotic changes of the liver, treatment of pancreatic insufficiency with enzyme medicaments, and pancreatic enzymes in the treatment of children with cystic fibrosis.

The candidate is a nutrition expert authorized to prepare statements on the nutrition at various hospitals and sanatoriums.

She is a member of the National Society of Nutrition and Dietetics, the National Society of Gastroenterology and Hepatology, BMA, and the Union of Scientists in Bulgaria.

CONCLUSION:

Based on the presented data, I believe that the medical, diagnostic, research and teaching work are definitely above the minimum requirements for the academic position Associate Professor. I confidently state that the candidate fulfils these requirements. I give my positive review for **Dr. Lili Slavcheva Trifonova.**

I recommend that the estimated jury award the **academic position Associate Professor** in higher education **7. Healthcare and Sport**, professional sphere **7.1. Medicine**; in the scientific field of **Hygiene** (incl. labor, communal, school, radiation, etc.) to **Assist. prof. Lili Slavcheva Trifonova, MD, PhD.**

Author of the review:

/Prof. Kiril Hristozov, MD, PhD/