

PEER REVIEW

on the occasion of a competition for tenure of the academic position of *professor* in the speciality of *Pediatrics* for the needs of the Department of Pediatrics at the Faculty of Medicine of the Medical University *Prof. Paraskev Stoyanov* of Varna

Concerning: the announced competition for tenure of the academic position of *professor* in the field of higher education No 7 Public health and sports, professional trend No 7.1 Medicine and scientific speciality of *Pediatrics* for the needs of the Department of Pediatrics at the Faculty of Medicine of the Medical University *Prof. Paraskev Stoyanov* of Varna and the Second Clinic of Pediatrics at St. Marina University Hospital of Varna which has been published in *State gazette* No 61/July 23, 2021.

Candidate (only): Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD

Peer reviewer: Prof. Valeria Ignatova kaleva, MD, PhD, member of the Scientific jury according to Order No R-109-390/September 20, 2021 of the Rector of the Medical University of Varna, assigned for peer reviewer

1. Concise biographic and professional data about the candidate

Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, was born on March 14, 1961 in the city of Varna. She graduated at Frédéric Joliot-Curie Fourth Foreign language secondary school with excellent marks and gold medal in 1980 and at Leningrad Pediatric Medical Institute with excellent marks in 1986. In 1987, she started to work as intern in the Pediatric Division of the Regional Hospital of the town of Provadiya. During the period between 1992 and 1996, she was regular post-graduate student in the Department of Pediatrics of the Medical University of Varna and the Clinic of Gastroenterology at St. Marina University Hospital of Varna. During the period between 1997 and 2008, she worked as intern in the Clinic of Gastroenterology and Endocrinology at the same hospital and during the period between 2008 and 2010 she worked in the Clinic of Cardiology, Rheumatology, Nephrology, Gastroenterology and Pediatric Intensive Division. Between 2010 and April 1, 2014, she worked as associate professor in the Third Division of the Multiprofile Specialized Pediatric Clinic at St. Marina University Hospital of Varna, and afterwards until present she works as head of the Second Clinic of Pediatrics at St. Marina University Hospital of Varna. Between August 1, 2018 and March 1, 2020, she is organizer and deputy-director of the Expert Centre of Cystic Fibrosis founded by her and since March 1, 2020, she is director of the Expert Centre of Cystic Fibrosis.

Miglena Dimitrova Georgieva, MD, acquired the PhD educational and scientific degree in 1997 with a theme of a dissertation work *Clinical, endoscopic, morphological and functional alterations in upper alimentary tract diseases among children and adolescents*. During the period between 2002 and 2015, she was part-time lecturer in the Centre for

Continuing Education, qualification of "Management in recreation" at the University of Economics of Varna. She attained the academic rank of associate professor in 2010.

Specialities acquired

Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, has a recognized specialities of *pediatrics* (in 1992), of *pediatric gastroenterology* (in 2006) and of *nutrition and dietetics* (in 2018).

Qualification for specialized medical activities

In the course of work in the field of pediatric gastroenterology and hepatology, Assoc. Prof. Georgieva has several certified trainings including the following specialized activities:

- Diagnostic and therapeutic fibrogastroscopy and fibrocolonoscopy in 2008
- Conventional echography (abdominal echography and superficial structures) - level one in 2008
- Interventional gastrointestinal endoscopy - level two in 2016
- Endoscopic cholangiopancreatography and related interventional procedures - level three in 2016
- Abdominal Doppler echography in gastroenterology - level two in 2016
- Interventional and endoscopic abdominal echography in gastroenterology - level three in 2016.

Postgraduate qualification

The postgraduate qualification of Assoc. Prof. Miglena Georgieva, MD, PhD, is associated mainly with pediatric gastroenterological and hepatic diseases, nutrition and dietetics: two five-day courses of pediatric gastroenterology (chronic hepatitis and food allergy) in the city of Sofia (in 1994 and 1995); a ten-day course of pediatric gastroenterology (selected chapters of the pediatric gastroenterology) in the city of Krakow, Poland, within a HOPE Project (in 1999); a five-day course of gastroenterology (selected chapters of the pediatric gastroenterology) within the medical seminars in the city of Salzburg, Austria (in 2004); a five-day European summer school of pediatric gastroenterology (selected chapters of the pediatric gastroenterology) in the city of Varna (in 2011); a seven-day basic course of clinical nutrition (enteral and parenteral nutrition) in the city of Dubrovnik, Croatia (in 2012); a three-day training in inflammatory bowel diseases in the city of Barcelona, Spain (in 2016), a course of basic training of Gauche's disease in the city of Amsterdam, the Netherlands (in 2016); five annual module trainings in nutrition and dietetics at the National Centre for Public Health Protection and Analyses in the city of Sofia (from 2013 till 2017); a two-month practical training in clinical nutrition and dietetics at Tsaritsa Giovanna Hospital of Sofia (in 2017); a three-day training in support of the children with cystic fibrosis in the city of Southampton, Great Britain (in 2017); a seven-day course of pediatric gastroenterology in the city of Graz, Austria (in 2019); a course of pedagogical bases of academic teaching in the city of Varna (in 2015), etc.

2. Evaluation of candidate's research activity

2.1. Scientometric indicators

Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, participates in the present competition with the following scientific works after her attainment of the academic rank of associate professor:

- one monograph and 12 publications in 6 scientific conference proceedings in Bulgaria with a total volume of 441 pages;
- a total 87 full-text articles in a total of 17 Bulgarian and 6 foreign journals with a total volume of 443 pages as the only author of 16 articles (in 18,39%) and as the first author in 22 articles (in 25,29% of the cases).
- a total 40 abstracts of reports and scientific communications published in a total of 18 proceedings with abstracts (15 in Bulgaria and three abroad) and in two foreign periodical journals as the only author of three abstracts (in 7,50%) and as the first author in nine abstracts (in 22,50% of the cases).
- a total of 107 plenary reports, oral communications and multimedia oral presentations with a total volume of more than 1000 slides delivered at a total of 58 specialized scientific forums such as national and international congresses, conferences and symposia in Bulgaria and at four international scientific forum abroad (in Prague, Vienna, Jerusalem and Berlin) as the only author of 41 reports and scientific communications (in 38,23%) and as the first author in 18 ones (in 16,82% of the cases).

The total impact factor after her attainment of the academic rank of associate professor is 3,874 (two full-text articles).

The total number of the citations or peer reviews after her attainment of the academic rank of associate professor is 54, of which 40 in scientific publications abstracted and indexed in world eminent data-bases with scientific information, or in monographs and books; two citations in scientifically peer-reviewed monographs and books and 12 citations or peer reviews in scientifically peer-reviewed journals which are not abstracted in data-bases. Three articles in three foreign journals are cited a total of 34 times while three articles in three Bulgarian journals - a total of 20 times.

2.2. Participations in research projects and clinical trials

Adviser of research projects in the Medical University "Prof. Paraskev Stoyanov" of Varna:

1. Assessment of the expression levels of selected microRNAs as potential biomarker in children and adolescents with inflammatory bowel diseases.
2. Bone health in children with celiakia.
3. Etiology, clinical picture and diagnosis of non-alcoholic liver disease in children and adolescents.

Participant in a research project in the Medical University "Prof. Paraskev Stoyanov" of Varna:

1. Nutritive status and food intervention in children with cystic fibrosis - a single-centre, open non-randomized trial

Participant in clinical trials

1. Improving celiac disease management in the Danube region by raising the awareness, improving the knowledge, and developing better skills.
2. Efficacy of *Lactobacillus reuteri* probiotic for prevention of antibiotic-related diarrheas and *Clostridium difficile*-related infections among hospitalized children and adolescents.
3. A phase III-B, randomized, open trial of monotherapy with pegylated interferon, alpha-2A or in combination with Lamivudine as compared to non-treated control patients - children with HBeAg-positive chronic hepatitis in a immunotolerance phase.
4. Effect of different carob mucilage contents in Friso Comfort on the lower esophageal sphincter.
5. A phase II, multicenter, parallel group, active-controlled, randomized, double-blind dose-ranging study to evaluate the efficacy and safety of different doses of Creon IR in subjects with pancreatic exocrine insufficiency due to cystic fibrosis.
6. A multicenter, randomized, double-blind, placebo-controlled phase II trial to evaluate the efficacy and safety of Lenbasum in cystic fibrosis.
7. A phase III, multicenter, randomized, double-blind, placebo-controlled, parallel-group efficacy and safety study of Linaclotide administered orally to children aged 6 to 17 years with functional constipation.

3. Main scientific trends and contributions

The research activity of Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, is based to a great extent on her immediate clinical diagnostic and therapeutic activity as pediatrician and pediatric gastroenterologist presenting with approved prestige among the scientific community and the children with diseases of the alimentary tract, liver, pancreas, nutritional disorders, etc. She profoundly investigates a series of socially significant and more seldom diseases of casuistic value for the medical science and practice. The spectrum of her scientific works is extraordinarily broad and includes populational-diagnostic and screening investigations, organization-methodological and thematic analyses as well as direct applied research in the field of pediatrics and pediatric gastroenterology.

The main scientific contributions of Assoc. Prof. Miglena Georgieva, MD, PhD, are in the field of the diagnosis, clinical picture and treatment of the functional gastrointestinal disorders, celiakia, cystic fibrosis, inflammatory and other bowel diseases, chronic liver disease (viral hepatitis and metabolic liver diseases, especially, non-alcoholic fatty liver disease), probiotics, prebiotics and psychobiotics, nutrition of the healthy suckling and child as well as in case of several diseases such as celiakia, cystic fibrosis, inflammatory bowel diseases, disorders in the autistic spectrum, neurodegenerative diseases and food allergy, rare diseases of the alimentary system and other organs, along with the genetic methods for the proof of the gastrointestinal tract diseases.

In general, the theoretical and methodological and practically applied contributions in the scientific works of Assoc. Prof. Miglena Georgieva, MD, PhD, could be systematized in the following main thematic fields: pediatric gastroenterology, pediatric hepatology and pancreatology, nutrition, clinical pediatrics, and casuistry.

A great number of publications belong to the field of pediatric gastroenterology and are devoted to actual problems in the following thematic trends: functional gastrointestinal disorders, upper alimentary tract diseases, celiakia, inflammatory bowel diseases, genetic diagnostic methods and several other intestinal diseases.

Several chronic liver diseases, cystic fibrosis as well as acute and chronic pancreatitis are born in mind in the field of pediatric hepatology and pancreatology.

The publications about the nutrition of the healthy child and of the children with different diseases, food allergy, intestinal microbiome, probiotics, prebiotics and psychobiotics represent undoubted interest, too.

The essential clinical features of a series of other diseases in childhood, some of which represent undoubted casuistic contribution for the Bulgarian and world science are investigated.

The problem of the functional gastrointestinal disorders is comprehensively considered for the first time in Bulgaria in an independent monograph and six articles. The classification of Rome IV criteria is introduced and algorithms for the diagnosis and schedules for non-medicamentous and drug treatment of these patients.

The diagnosis of the gastroesophageal reflux by means of impedance pH-metry is used for the first time in Bulgaria in two articles and one abstract. Both one article and one abstract are devoted to the clinical picture, diagnosis and treatment of the achalasia, a rare disease.

Genetic tests for the proof of the genetic predisposition towards celiakia are applied for the first time in Bulgaria. Seven articles and six abstracts deal with the diagnosis and treatment of this disease.

The microribonucleic acids are used for the first time in Bulgaria in the diagnosis and follow-up of two inflammatory bowel diseases such as ulcerative colitis and Crohn's disease in childhood and the results are published in three articles. In other eight articles and three abstracts, the issues of the deep venous thrombosis and the recommendations of the European Society of Pediatric Gastroenterology, Hepatology and Nutrition concerning the role of the nutrition in the treatment of these diseases in childhood are discussed.

The novelties in the etiology, pathogenesis, classifications, clinical variations, diagnosis and therapeutic influence on the large bowel polyps, rotavirus and enterovirus enteritis, *Clostridium difficile* infection and diarrhea are reflected in five articles and one abstract.

For the first time in Bulgaria, the contemporary concepts of the intestinal microflora, pro-, pre- syn- and psychobiotics are systematized in seven articles and one abstract and the positive prophylactic and therapeutic effect of the probiotics in the diarrhoea related with antibiotic therapy is proved.

Eleven articles and seven abstracts are devoted to the actual issues of a series of chronic liver diseases in childhood (chronic viral and medicamentous hepatitis, Wilson's disease, α 1-antitrypsin deficiency, non-alcoholic liver disease, Gilbert's syndrome, Rey's syndrome, autoimmune liver disease, ascites syndrome, hepatorenal syndrome, acute liver failure, benign and malignant liver tumours, familial nodular hyperplasia, etc.). Two abstracts one of which has been published in an eminent foreign journal with impact factor are devoted to the acute and chronic hepatitis in children. The role of nutrition and contemporary genetic

therapy of cystic fibrosis as well as the clinical peculiarities of this disease are the object of four articles and five abstracts.

The issues of the nutrition of the healthy children and in a great number of severe diseases are investigated in a total of 19 articles and three abstracts. The recommendations for a special nutrition in inflammatory bowel diseases, neurodegenerative diseases, cystic fibrosis, acute and chronic pancreatitis represent an interest.

The role of the extensively hydrolyzed milks for the treatment of suckling allergy towards cow milk as well as of the partially hydrolyzed milks for food allergy prevention is described in four articles and one abstract for the first time in Bulgaria.

Some results from genetic investigations of the HLA-genotypification in celiakia and suspicion on Gilbert's disease are published in four articles and four abstracts for the first time in Bulgaria.

Rare diseases are reported in seven articles and five abstracts.

The results from the examination of several other diseases in childhood such as hereditary hemorrhagic teleangiectasia, anti-NMDR encephalitis, primary form of tularemia, foreign body aspirations, urticaria, headache in children with epilepsy, etc. are published in seven articles and four abstracts. The results dealing with adipokine and other markers of metabolic syndrome and abdominal obesity are published for the first time in Bulgaria.

The primary goal of Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, which she achieves during her work of many years consists in the implementation of a timely and precise diagnosis of the mentioned diseases and disorders in childhood and adolescence, the performance of the adequate individualized treatment corresponding to contemporary standards for best clinical practice, relief of ill child's suffering as well as the averting the development of severe socially significant diseases in children and adults.

4. Teaching and lecturer's activity

Assoc. Prof. Georgieva teaches the speciality of „pediatrics” in Bulgarian and English to the students of the speciality of “medicine” at the Faculty of Medicine and of the speciality of “public health inspector” at the Medical College of Varna. Her annual teaching loading during the last four academic years is between 124 and 144 hours as her horarium includes hours for lecture presentations and practical exercises.

Assoc. Prof. Miglena Georgieva, MD, PhD, performs education according to individual courses for postgraduate qualification in pediatric gastroenterology and nutrition. She is adviser of three postgraduate students in pediatrics and of four postgraduate students in pediatric gastroenterology.

Under the guidance of Assoc. Prof. Miglena Georgieva, MD, PhD, two postgraduate students, Niya Yolkova Rasheva, MD, and Krasimira Ivanova Koleva, MD, have defended their doctoral theses for the acquisition of the educational and scientific degree of PhD. At presence, she is adviser of six other postgraduate students - Yoana Dyankova Dyankova, MD, Margarita Ivanova Nikolova, MD, Mihail Fotinov Siromahov, MD, Zhivka Emilova Chuperkova, MD, Martina Ivanova-Galabova, MD and Diana Yordanova Yordanova, MD.

5. Public and expert activity

Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, is member of the Board of managers of the Bulgarian Pediatric Association and president of the Bulgarian Society of Pediatric Gastroenterology, Hepatology and Nutrition. She is member of the following professional and scientific organizations:

1. Bulgarian Pediatric Association
2. Bulgarian Scientific Society of Gastroenterology
3. Bulgarian Union of Physicians
4. BULSPEN (Bulgarian Society of Enteral and Parenteral Nutrition)
5. Bulgarian Society of Neurogastroenterology and Motility
6. ICMART (International Council of Medical Acupuncture and Related Techniques)
7. Société Française de Pédiatrie
8. ESPGHAN (European Society of Pediatric Gastroenterology, Hepatology and Nutrition)
9. ESPEN (European Society of Enteral and Parenteral Nutrition).

She is participant in the scientific jury for awarding of the educational and scientific degree of PhD by six postgraduate students, for two candidates for “associate professor” and in the election of one “assistant-in-chief”.

I know personally Assoc. Prof. Georgieva since the time of her appointment as intern in the Clinic of Gastroenterology and Endocrinology at St. Marina Multiprofile Hospital of Varna. During more than twenty years, I am witness not only of her incredible work capacity and preciseness in terms of the therapeutic, diagnostic, research and lecturer’s activity but also of her flawless responsiveness and fellow-feeling in her professional relationships with students, postgraduate students, lecturers, ill children and their families. Nowadays she is one of the leading experts of pediatric gastroenterology in Bulgaria and consultant preferred by the medical specialists and patients who presents with impressing prestige among the pediatric and gastroenterological community.

Conclusion

Based on the aforementioned facts I consider with complete conviction that the scientometric indicators and professional qualification of Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, entirely conform on the requirements of the Statute-book for the conditions and order for the acquisition of scientific degrees and for tenure of the academic position of “professor” in the Medical University “Prof. Paraskev Stoyanov” of Varna.

That is why I would like to recommend to the esteemed members of the Scientific jury to vote positively for the tenure by the candidate, Assoc. Prof. Miglena Dimitrova Georgieva, MD, PhD, of the academic position of “professor” in the Medical University “Prof. Paraskev Stoyanov” of Varna for the needs of the Department of Pediatrics at the Faculty of Medicine of the Medical University Prof. Paraskev Stoyanov of Varna and the Second Clinic of Pediatrics at St. Marina University Hospital of Varna.

Varna, October 14, 2021.

Peer reviewer:
Prof. Valeria Ignatova Kaleva, MD, PhD