

**ATTN: THE CHAIRMAN OF THE SCIENTIFIC
JURY AT THE MEDICAL UNIVERSITY “PROF.
PARASKEV STOYANOV” OF VARNA**

PEER REVIEW

by

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CONCERNING: the participation of Krasimira Ivanova Koleva, MD, PhD in a competition promulgated in State gazette No 32/April 26, 2022 for tenure of the academic position of '**Associate Professor**' in the field of higher education No 7 Public health and sports, professional trend No 7.1 Medicine and scientific speciality of **Pediatrics** - 0,5 pay-roll office for the needs of the Department of Pediatrics at the Faculty of Medicine of the Medical University 'Prof. Paraskev Stoyanov' of Varna and 0,5 pay-roll office for the needs the Second Pediatric Clinic at St. Marina University Hospital of Varna according to the Order No R-109-264/June 23, 2022, of the Rector of the Medical University 'Prof. Paraskev Stoyanov' of Varna, Valentin Lyubomirov Ignatov, MD, PhD. Krasimira Ivanova Koleva, MD, PhD. is the only candidate in the competition.

I have been assigned to prepare the present peer review in pursuance of the Decision of the Scientific jury appointed by Order of the Rector of the Medical University 'Prof. Paraskev Stoyanov' of Varna, Valentin Lyubomirov Ignatov, MD, PhD, according to Protocol No 67/June 20, 2022.

1. Concise biographic and professional data about the candidate

Krasimira Ivanova Koleva was born on June 17, 1966 in the village of Vetrino, Region of Varna. She graduated from the Medical University 'Prof. Paraskev Stoyanov' of Varna in 1999. Krasimira Koleva, MD, started to work as a physician in a medical centre. Since 2010, she was appointed as intern, and since 2017, she is assistant in the Department of Pediatrics at St. Marina University Hospital of Varna. She has acquired a speciality of pediatrics in 2009 and a speciality of pediatric gastroenterology in 2016. During the period between 2019 and 2021, she is doctoral student in independent preparation form in the speciality of pediatric gastroenterology at the Department of Pediatrics. Krasimira Koleva, MD, acquires the educational and scientific degree of 'doctor of philosophy' in 2021. The theme of her dissertation work is '*Some contemporary diagnostic aspects of inflammatory bowel diseases in children and adolescents*'.

2. Evaluation of candidate's research activity

Scientometric indicators:

In the present competition, Krasimira Koleva, MD, PhD, participates with the following scientific works:

➤ a dissertation work for the acquisition of the educational and scientific degree of 'doctor of philosophy'

- one-author monograph entitled ‘Novelties in the treatment of ulcerative colitis and Crohn’s disease in childhood and adolescence’.
- a total of 29 full-text articles published in a total of eight Bulgarian journals and one foreign journal, the only author in two articles (6.90%), and the first author - in five articles (17.24%).
- a total of six reports published in proceedings of five scientific forums in Bulgaria.

The total number of **citations** of three articles is 11 (in seven articles by Bulgarian authors) and in four articles by foreign authors).

Krasimira Koleva, MD, PhD, participates in one research project in the Medical University ‘Prof. Paraskev Stoyanov’ of Varna on the theme: ‘Assessment of the expression levels of selected microRNAs as potential biomarkers in children and adolescents with inflammatory bowel diseases’.

3. Main scientific trends and contributions

The research activity of Krasimira Koleva, MD, PhD, is based on her clinical therapeutic and diagnostic work as pediatrician and pediatric gastroenterologist presenting with prestige among the Bulgarian scientific community and the children with diseases of the gastrointestinal tract, liver, pancreas, etc.

The main directions in her research work are related to the contemporary diagnosis and treatment of the inflammatory bowel diseases, gastrointestinal and liver diseases in childhood and adolescence.

The novelties in the diagnosis of the inflammatory bowel diseases in childhood and adolescence have been systematized in the dissertation work and in the monograph while the recent scientific achievements and Dr. Krasimira Koleva’s own experience in the field of the treatment of these socially significant diseases are the target of the monograph.

An original diagnostic algorithm concerning the inflammatory bowel diseases (Crohn’s disease, ulcerative colitis and non-specific ulcerative colitis) in childhood and adolescence has been elaborated. The diagnostic and differential-diagnostic value not only of several laboratory parameters such as erythrocyte and leukocyte count, concentrations of hemoglobin, serum iron, C-reactive protein, fibrinogen, fecal calprotectin, cytoplasmic and perinuclear antineutrophilic cytoplasmic antibodies) but also of modern methods for imaging diagnosis such as abdominal echography, computed tomography, fibrogastroduodenoscopy and fibrocolonoscopy has been confirmed.

Several publications have been devoted to the clinical symptoms, methods of diagnosis, genetic tests, complications and treatment of celiakia. The role of gluten-free diet for its treatment, the role of DEXA and the place of osteocalcin and osteoprotegerin for the diagnosis of osteoporosis, one of the complications of celiakia, have been discussed.

The peculiarities of cystic fibrosis, gastroesophageal reflux disease, primary and secondary gastroesophageal reflux in suckling age have been analyzed. The issues of the intestinal flora and its relation to human health are commented. The important role of the intestinal and fecal microbiome for the human organism has been considered and the revolution of probiotics has been followed-up. The results from a single-centre prospective trial with *Lactobacillus reuteri* DSM 17938 probiotic for the prevention of antibiotic-associated infections in children treated with broad-spectrum antibiotics have been reflected.

The diseases taking their course with chronic diarrhea in childhood such as celiakia, cystic fibrosis, lactase deficiency, irritable bowel syndrome and inflammatory bowel diseases and causing nausea and vomiting in childhood have been discussed. The clinical picture of food allergy and, especially, of eosinophilic esophagitis, gastritis and gastroenteritis, atopic dermatitis, allergic proctocolitis, and contact dermatitis has been presented.

Several articles have been devoted to the diagnosis of non-alcoholic fatty liver disease in children and adolescents. The pathogenesis of the fatty liver degeneration with focus on the non-alcoholic fatty liver disease and its relationship with obstructive sleep apnea in children has been commented. The rare *vena portae* thrombosis related to kidney affection in children, adolescents and young persons, the deep venous thrombosis as a complication of ulcerative colitis in childhood and the deep venous thrombosis of the femoral and iliac veins in a child with acute ulcerative colitis have been presented. A kidney affection in children, adolescents and young persons with Wilson's disease and acute liver failure as a consequence of this illness has been described.

There are undoubted contributions in the articles dealing with suckling's nutrition, permeable alimentary tract, constipation, chronic liver disease and hepatorenal syndrome in childhood.

The theoretical and applied contributions in the scientific works of Krasimira Koleva, MD, PhD, are in the following main thematic fields: pediatric gastroenterology, pediatric hepatology, pediatric pancreatology, clinical pediatrics, and intestinal microbiome.

For the first time in Bulgaria, the diagnostic and differential-diagnostic role of 11 microribonucleic acids (microRNAs) in children with ulcerative colitis and Crohn's disease has been investigated. Significant correlation dependences between microRNA195, microRNA131-a, microRNA142-3p, and microRNA223, on the one hand, and standard parameters of anemia and inflammation, on the other hand, have been established.

For the first time in Bulgaria, in a dissertation work, the constellation of appropriate modern laboratory and imaging methods of investigation in the children and adolescents with Crohn's disease, ulcerative colitis and non-specific colitis has been defined.

For the first time in Bulgaria, the experience with the application of the genetic tests for the predisposition towards celiakia has been presented.

For the first time in Bulgaria, attention has been paid to malnutrition in the children with cystic fibrosis and advices for a correct nutrition within its correlation with the quality of life have been presented.

For the first time in Bulgaria, pH-metry with impedance during the diagnosis of the primary and secondary gastroesophageal reflux in suckling age has been used.

For the first time in Bulgaria, the scientometric aspects of the international scientific communications and dynamic institutionalization of research on the issues of Crohn's disease in children have been investigated.

For the first time in Bulgaria, the role of the microRNAs, serological tests and elastography for the diagnosis of the non-alcoholic fatty liver disease in childhood and adolescence has been analyzed.

4. Teaching and lecturer's activity

Krasimira Koleva, MD, PhD, is involved in the education of medical students in the discipline of 'pediatrics'. Her teaching and lecturer's activity as assistant at 0,5 pay-roll office in the Department of Pediatrics during the period between 2017 and 2021 is the following: during the 2017-2018 academic year - 232 hours; during the 2018-2019 academic year - 210 hours; during the 2019-2020 academic year - 198 hours and during the 2020-2021 academic year - 216 hours.

5. Memberships in scientific societies and organizations

Krasimira Koleva, MD, PhD, is member of several scientific societies and organizations:

1. Bulgarian Pediatric Association
2. Bulgarian Society of Human Genetics and Genomics
3. ESPGHAN (European Society of Pediatric Gastroenterology, Hepatology and Nutrition)
4. ECCO (European Crohn and Colitis Organization)

6. Conclusion

Krasimira Koleva, MD, PhD, possesses profound theoretical, clinical and professional skills. She is involved in the education of students, postgraduate students and pediatricians, with a scientific and diagnostic-therapeutic activity of sufficient volume. Her publications cover various trends in pediatrics. Her scientific elaborations are distinguished for preciseness, academic style, and innovation. based on the abovementioned facts and candidate's personal qualities I convincingly consider that the professional qualification, research and teaching and lecturer's activity of Krasimira Ivanova Koleva, MD, PhD, completely meet 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 '**Associate Professor**' in the Medical University 'Prof. Paraskev Stoyanov' of Varna.

I recommend to the honoured members of the Scientific jury to vote positively for the tenure by Krasimira Ivanova Koleva, MD, PhD, of the academic position of '**Associate 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 Pediatric Clinic at St. Marina University Hospital of Varna.

Peer reviewer:



Sofia, September 18, 2022

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