

## SCIENTIFIC OPINION

**Regarding:** Announced competition for the academic position of *associate professor* in the field of higher education 7. Health care and sports, professional direction 7.1 Medicine and scientific specialty "Pediatrics" for the needs of *Department of Pediatrics* in Faculty of *Medicine* of the Medical University – Varna, published in the *State Gazette*, no. 32 of 26.04.2022

**Candidate (single):** Dr. Krasimira Ivanova Koleva, MD, PhD

**Scientific Opinion by:** Prof. Dr. Ruzha Zlatanova Pancheva-Dimitrova, MD, PhD, member of the Scientific Jury under order R-102-1161/10.05.2022 of the Rector of the Medical University – Varna.

### 1. Brief biographical and professional data about the candidate

Dr. Krasimira Ivanova Koleva was born on June 17, 1966, in the village of Vetrino, region Varna. She graduated from the Medical University - Varna in 2000, and successively acquired the specialty "pediatrics" in 2009 and "pediatric gastroenterology" in 2016.

Her academic career started in 2018 at the Medical University of Varna as a full-time assistant in the Department of Pediatrics. In the period 2019 - 2021, she was an independent doctoral student at the same department, specialty "Pediatrics". She successfully defended her dissertation on "*Some modern diagnostic aspects of inflammatory bowel diseases in children and adolescents*" and obtained the educational and scientific degree of *doctor of philosophy*.

The annual study load during the last four academic years corresponds to a norm adopted by the academic council of 220 hours - Bulgarian language training in pediatrics.

Her postgraduate qualifications are mainly related to the diagnosis and therapy of inflammatory bowel diseases in childhood, diagnostic approaches in gastrointestinal diseases, the importance of probiotics, prevention and treatment of food allergies.

### 2. Evaluation of the candidate's scientific activity

The presented list of Dr. Koleva's scientific works includes 38 titles. After taking into account the dissertation work and the publications until the appointment of the academic position of PhD, 34 publications (31 in Bulgarian and 3 in foreign) in scientific publications are available for review under this competition, of which 9 are referenced and indexed in world-famous databases and 25 in non-referenced journals or edited collective volumes.

Of the multitude of participations in Bulgarian and international forums, only 4 were given in the officially submitted report.

### 3. Main contributions in scientific works

The contributions of Dr. Koleva's scientific works can be grouped into the following three main scientific directions:

✓ Diagnosis and treatment of inflammatory bowel diseases

The dissertation and the monograph examine IBD in children and teenagers.

More than 10 micro RNAs have been investigated for their diagnostic utility in children with ulcerative colitis and Crohn's disease. Anemia and inflammation are associated with micro RNA195, micro RNA131-a, micro RNA142-3p and micro RNA 223. For the first time in Bulgaria, laboratory markers and specific imaging techniques for Crohn's disease, ulcerative colitis and non-specific colitis have been defined. A number of laboratory indicators (erythrocytes, leukocytes, hemoglobin, serum iron, C-reactive protein, fibrinogen, fecal calprotectin, cytoplasmic and perinuclear antineutrophil cytoplasmic antibodies) and modern techniques are associated with diagnostic and differential diagnostic approaches in Crohn's disease, ulcerative colitis and nonspecific colitis. Both the dissertation and the monograph discuss the therapy of IBD in childhood.

✓ Diagnosis and treatment of gastrointestinal diseases in children and adolescents

A series of studies involving Dr. Koleva evaluated the symptoms, diagnosis, consequences, and therapy of celiac disease in genetically susceptible individuals. The clinical presentation of celiac disease in children, the importance and difficulties of a gluten-free diet and therapy, the role of DEXA, and osteocalcin and osteoprotegerin in celiac disease-related osteoporosis are discussed. Dr. Koleva has contributed to publications regarding patients with pancreatitis, cystic fibrosis, and liver abnormalities. Attention is drawn to the fact that malnutrition in children with cystic fibrosis must be treated in Bulgaria and proper nutrition and quality of life must be ensured. Genetic mutations in this group of patients are associated with pancreatitis, hepatitis and cirrhosis. Various other articles related to GERD in childhood and otorhinolaryngology, an invasive diagnostic approach using impedance pH-metry in GERD in infants at Sveta Marina UMBAL-Varna, and the effects of antireflux infant formulas complete the candidate's research portfolio. Dr. Koleva is also involved in research clarifying the effect of the microbiome and its manipulation through probiotics in various childhood conditions.

✓ Diagnosis and treatment of liver diseases in children and adolescents

Several articles have been devoted to nonalcoholic steatohepatitis (NAFLD) in childhood. Innovative laboratory metrics associated with imaging and classification systems

are indicated, and another analyzes micro RNA expression in these youth. The importance of CK-18 as a major biomarker is highlighted, and arterial hypertension, elevated ALT levels and insulin resistance are important clinical-biological signs. The pathogenesis of fatty liver degeneration with emphasis on NAFLD and sleep apnea in children is investigated. The importance in Bulgaria of studied microribonucleic acids, serological tests and elastography for the identification of NAFLD is demonstrated.

#### **4. Critical notes and recommendations**

The set of documents lacks data on the candidate's presentations in our and international congresses and conferences. My personal impressions are that Dr. Koleva is one of the sought-after lecturers in the field of pediatric gastroenterology. Her presentations contribute to the dissemination of modern knowledge and development directions in this field. That is why it would be good to keep this part of her activity in mind, regardless of the fact that the scientometric value of these appearances is small. Their practical value is significant.

#### **5. Conclusion**

The summarized analysis of the aspects presented above show that the scientometric indicators, professional qualification and social authority of Dr. Krasimira Koleva fully meet the requirements of the Regulations on the terms and conditions for acquiring scientific degrees and occupying the academic position of *Associate Professor* at the Medical University *Prof Dr. Paraskev Stoyanov* – Varna.

Because of this and because of my personal impressions of her academic activity and professional collegiality, I recommend the respected members of the Scientific Jury to vote positively for the appointment of the candidate Dr. Krasimira Ivanova Koleva, MD to the academic position of *Associate Professor* at the Medical University " *Prof. Dr. Paraskev Stoyanov*" - Varna .

City of Varna, 18/09/2022

Signature: ..........

*Prof. Dr. Ruzha Pancheva-Dimitrova, MD, PhD*