

## ACADEMIC OPINION

by **Assoc. Profesor Dr. Miroslava Mileti Dinkova, DMD, PhD, DSc**

External member of the Scientific Jury, according to an order of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov"-Varna, №: R-109-518/30.11.2023

**Subject:** Competition for the academic position "Associate Professor" in the field of higher education "7. Health care and sports", professional direction "7.2. Dental medicine" for the needs of the Department of Orthodontics (published in the SG, no. 83 of 03.10.2023) and on the basis of Art. 4, para. 1, para. 2 of the Law on the Development of Academic Staff in the Republic of Bulgaria, Art. 57, para. 1 and para. 2 of the Regulations for its Application and the Rules for the Development of Academic Staff of Medical University -Varna Art. 6, para. 1, Art. 127, para. 1 and para. 2

**Candidate:** Chief Assist. Prof. Dr. Iliyana Georgieva Atanasova, DMD, PhD – Assistant Professor at the Department of Orthodontics, Faculty of Dental Medicine, Medical University – Varna

### **Candidate's career profile**

Dr. Iliyana Georgieva Atanasova, DMD, PhD was born in 1979 in Varna. In 1996 she graduated with excellent results from the High school "St. Kliment Ohridski" Varna, profiled with Russian and English language programme. In 1999 she graduated with excellent results from the Medical College of Varna specialty Pharmacy with professional qualification assistant pharmacist. In 2011 she obtained Master's Degree in Dental Medicine at the Medical University of Varna and graduated with honors and awards. She was granted with "GOLDEN HIPPOCRATES" Award as a holder of DIPLOMA MAGNA CUM LAUDE of Alumni 2011 and Diploma "STUDENS OPTIMUS" –Prof. Dr. Slavcho Davidov for excellent results and high academic achievements in the academic, scientific and creative activities of Alumni 2011. In 2016 she continued her profesional development as post- graduate student in Orthodontics In 2017 after a competition she occupied pposition of Assistant Professor at the Department of Orthodontics, Faculty of Medicine at MU-Varna. In 2019 she was admitted as a full-time PhD student at the Department of Orthodontics. In 2020, Dr. Atanasova acquired a specialty in Orthodontics. In 2022, she acquired the educational and scientific degree "Doctor" and from November 2022 after a competition she took the position of "Chief Assistant Professor" in

the Department of Orthodontics. She is fluent in English and Russian. She conducts lecture courses and practical training of students and trainee doctors in orthodontics – Bulgarian-language and English-language training. Regular member of Bulgarian Dental Association, Bulgarian Orthodontic Society, Australian Dental Association, European Orthodontic Society. She has 14 publications and number of participations in National and International Conferences and Symposia.

**General characteristics of scientific work in the overall academic development of the candidate**

The materials for occupying the academic position "Associate Professor" attached for participation in the competition are in accordance with the requirements of the Law on Academic Staff Development and Academic Positions at the Medical University - Varna.

- Dr. Ilyiana Atanasova applied for the competition with scientific publications covering the minimal scientometric requirements for occupying the academic position of Associate Professor. For participation in the competition are presented:
- Dissertation on the acquisition of scientific and educational degree "Doctor" on "Evaluation of individual indicators for orthodontic treatment of children in mixed and permanent dentition".
- Monographic work on "Age determination by morphological and physiological characteristics of Dental tissues", 2023, ISBN 978-619- 221-431-9.
- 9 publications, of which 3 are published in scientific journals, referenced and indexed in world-famous databases with scientific information Scopus and Web of Science; 3 have been published in non-refereed journals with scientific review and 3 publications beyond the minimum scientometric requirements for earning the academic position "Associate Professor" in non-refereed journals with scientific review.

The total number of points from the actually published articles is 229.5. Of 4 publications Dr. Atanasova is an independent author, of one is the first author, of three - a second author and of one publication - a fourth. Dr. Atanasova provides an additional list of 3 more full-text publications before the current competition.

Dr. Atanasova participated in 8 scientific forums in Bulgaria and abroad after acquiring the PhD Degree.

The presented scientific papers and the results of the research work are divided thematically in the following scientific fields:

1. Dental age of Bulgarian children in mixed and permanent dentition (Г7.3, Г8.3)
2. Skeletal age of Bulgarian children 7-17 years. Mean chronological age of Bulgarian children during the phases of pubertal pick CVM II, CVM III и CVM IV. (A1)
4. Study of individual indicators of puberty growth period and development of a prognostic model on orthopantomography for initiation of orthodontic treatment.( A1, B3)
5. Incidence of tooth germ mineralization stage of permanent teeth in the pubertal growth period. (Г7.2, Г8.1, Г8.2)
6. Determination of age at different stages of human ontogenetic development by different characteristics of dental tissues (B3)
7. Mouth breathing in children in mixed and permanent dentition and associated dental and occlusal deformities (Г7.1)
8. Pathology of dental eruption and rotation of upper permanent first molars (Publications beyond the minimum scientometric requirements)

A reference is presented for 19 citations, which bring 135 points, of which 2 are citations in refereed and indexed scientific journals and 17 are citations in non-refereed journals with scientific review and in monographs.

Dr. Atanasova has scientific profiles in three databases: Google Scholar, Research Gate and ORCID.

The contributions from the research activities of Dr. Iliyana Atanasova can be differentiated as follows:

1. Contribution of an original nature

For the first time in Bulgaria, a model is being developed to determine the puberty growth period on orthopantomography by assessing individual indicators of growth and development.

2. Scientific-theoretical contributions

- The mean chronological age in girls and boys was established before the peak of pubertal development in stage CVM II, at the peak of pubertal development in stage CVM III and after the peak of pubertal development in stage CVM IV by the method of cervical spine maturity by Baccetti.

- An assessment of dental age by the Demirjian method and the Willems method was made in Bulgarian children aged 7-16 years and the accuracy of both methods in determining dental age relative to chronological age and between them was examined.
  - The stages of mineralization of teeth 23, 33, 35, 37, 38 in the stages of skeletal age - CVM II, CVM III and CVM IV by Baccetti were established.
3. Scientifically applied contributions
- A model is presented to determine the puberty growth period on orthopantomography, by assessing the degree of mineralization of different teeth in combination with chronological age and sex.
  - The Willems method for assessing dental age in Bulgarian children aged 7-16 years is recommended.

"Age determination by morphological and physiological characteristics of dental tissues" is a monographic work in which the author, Dr. Iliyana Atanasova, for the first time in Bulgaria, makes a systematic analysis of the principles of growth and development of the facial skeleton and its individual characteristics. It presents a meaningful, precise and with ease in-depth characterization of the pre- and postnatal development of skeletal structures at the gene and molecular level.

Classifies contemporary methods for determining dental, skeletal and chronological age in growing and non-growing individuals. Dr. Atanasova interprets the regularities of skeletal growth and dental development and the associated pathology in the dental and jaw system. The scale of the study allows her to derive a relationship between dental, skeletal and chronological ages with the possibility of determining chronological age in both growing individuals and adults. Dr. Atanasova found the peak of puberty development (Skeletal age CVM III) in Bulgarian children, which for girls is 11.58 - 12.02 years and for boys - 12.12 - 12.93 years. This is also the most favorable moment for the treatment of Class II Malocclusion with the possibility of maximum change in the anterior-posterior position of the lower jaw. The most favorable time for the treatment of class III Malocclusion with maximum effect on the growth of the upper jaw is the prepubertal period (Skeletal age CVM II) of growth, which in Bulgarian children is up to 11.63 - 11.98 years for boys and up to 9.91 - 10.54 years for girls, established by the author.

Dr. Iliyana Atanasova created and presented for the first time in Bulgaria a model for determining the puberty period of growth on orthopantomography by assessing individual

indicators of growth and development. She develops guidelines for the initiation of orthodontic treatment for orthopedic corrections of the malocclusions, which determines the significant clinical value of her scientific work.

Dr. Atanasova studied the degree of mineralization of maxillary and mandibular canines, mandibular second premolar and second molar by the method of determining dental age by Demirjian. She found a correlation between the peak of puberty in boys and the stage of complete root development of maxillary and mandibular canine. In girls, puberty peak correlates with complete root development of only the mandibular canine. In addition, she found that chronological age in boys corresponded with stage G of root development of maxillary and mandibular canines, as well as mandibular second premolar. In girls, the assessment of the dental age of both canines showed the same result, while the degree of mineralization of the mandibular second premolar and molar was in the earlier stage-F by Demirjian.

**Complex, qualitative assessment of educational-methodological and teaching activities**

Dr. Iliyana Atanasova has 8 years and 4 months teaching experience and 8 years and 7 months experience in the field of Dentistry, and the last three years she has acquired a specialty in Orthodontics. The average workload covers the norm of 360 academic hours almost the entire period: 2018/2019 – 358 hours; 2019/2020 – 378hours; 2020/2021 – 367 hours; 2021/2022 -344 hours and 2022/2023 – 395. She participates in the training of both Bulgarian-language students and foreign language students. In the last year Dr. Atanasova participated in the training of post-graduate students in Orthodontics.

**Compliance with the requirements of MU-Varna for occupying the academic position of Associate Professor**

The presented academic transcript shows that Ch. Ass. Prof. Dr. Iliyana Atanasova meets, and in some groups indicators exceed the minimum scientometric requirements for occupying the academic position "Associate Professor", according to the Rules for Development of the Academic Staff of MU-Varna (Table1).

Table1. Compliance with the scientometric requirements of the Medical University-Varna to occupy the academic position of “Associate Professor.”

Indicator groups	Scientific work	Required number of points	Number of points based on evidence presented by the applicant
A/Indicator 1	Dissertation for scientific and educational degree "Doctor" before associate professor	50 p.	<b>50 p.</b>
B/Indicator 3	Habilitation work - monograph	100 p.	<b>100 p.</b>
Г /Sum of Indicators 5-9	Total publications	200 p..	<b>207 p.</b>
Д/ Sum of Indicators 10-12	Citing	50 p.	<b>135 p.</b>

**Overall assessment of the applicant regarding the compliance of the mandatory conditions for quantitative criteria and scientometric requirements according to the Rules of Organization and Procedure of MU – Varna**

The scientific achievements of Dr. Iliyana Atanasova are an indicator of her competence in the field of research. Purposefully and convincingly she defends her goals for professional improvement, practical experience and interests, shows precision and consistency in her research quests in the field of orthodontics.

**Conclusion**

The candidate in this competition Dr. Iliyana Georgieva Atanasova fully meets the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria, the Rules for its Application and the Rules for the Development of the Academic Staff at MU-Varna for the academic position "Associate Professor".

The career, scientific and professional growth of Dr. Iliyana Atanasova are at the highest academic level. The scientometric requirmets give me grounds to declare my positive assessment and to vote with conviction "YES" for awarding the academic position "**Associate Professor**" in the field of higher education 7. Health care and sports, professional field 7.2. Dental Medicine in the specialty "Orthodontics" of **Dr. Iliyana Atanasova**

10.02.2024  
Sofia

Academic Opinion written by:

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