

# **OPINION**

**By Prof. Dr. Stefan Peev PhD, DSc**

**Faculty of Dental Medicine, MU-Varna**

**Appointed as Chairman of the Scientific Jury**

**with order № P-109-107/29.01.2025 of the Rector of MU -Varna**

**Subject:** Competition for the academic post of "Professor" in the field of Higher Education: 7. Health care and Sport, professional field 7.2. Dental Medicine, scientific specialty "Orthodontics" for the needs of the Department of Orthodontics - FDM - MU - Varna, announced in Official Gazette No. 101/29.11.2024.

**The review was prepared on the basis of the Academic Staff Development Act in the Republic of Bulgaria (ASDA), the Regulations for the Implementation of the ASDA and the Regulations for the Conditions and Procedures for the Acquisition of Scientific Degrees and for Holding Academic Positions at MU Varna. It is written and submitted on the basis of the Order No. P-109-107 / 29.01.2025 of the Rector of MU - Varna for the appointment of members of the Scientific Jury in the competition for the position of AD "Professor" in the scientific specialty "Orthodontics".**

**One candidate submitted the required documents for the competition within the prescribed deadline: Assoc. Prof. Dr. Hristina Ivanova Arnautska PhD, Associate Professor in the Department of Orthodontics, FDM Varna. For the competition all the necessary documents have been submitted in accordance with the requirements of the Law on Academic Staff Development, its Implementing Regulations and the Regulations on Academic Staff Development of MU - Varna.**

**Biographical data and professional development of the candidate:**

**Assoc. Prof. Dr. Hristina Arnautska was born in 1974 in Varna. She graduated from high school in Varna in 1993 and completed her studies at the Faculty of Dentistry at the Medical University of Sofia in 1999, earning a Master's degree in Dentistry.**

**In 2001 she enrolled in a specialization in Orthodontics, which she acquired in 2006. Her academic career starts in 2008 at the Medical University of Varna, where she held the academic positions of "Assistant Professor" and "Senior Assistant Professor" at the Department of PDM and Orthodontics in the Faculty of Dentistry.**

**In 2011 Assoc. Prof. Hristina Arnautska earned an additional qualification as a Master in Health Management from the Medical University of Varna. In 2013, she successfully defended her dissertation, titled "Diagnosis and Prediction of Canine Teeth Retention," and was awarded the educational and scientific degree of "Doctor."**

**In 2016, she was appointed as an Associate Professor, and became the first Head of the Department of Orthodontics at the Medical Faculty of the Medical University of Varna, a position she held until 2024. Throughout her professional development, Assoc. Arnautska has participated in numerous training programs and continuous education courses.**

**She has a total of 24 years and 3 months of work experience, including 16 years and 5 months of teaching experience, as of the date the certificate was issued by MU Varna for the purpose of the competition.**

**She is a member of the World Federation of Orthodontics, the European Orthodontic Society, SIDO - the Italian Orthodontic Organization, the Bulgarian Orthodontic Society, the Lingual Orthodontics Club, the BDA, BIOMEDE and the Union of Scientists in Bulgaria. She is a member of the ethics committee of the Bulgarian Dental Association, Varna. She is fluent in English and Russian.**

**From the presented documentation her upward career development and her participation in a number of scientific societies is clearly visible.**

**Research activities:**

**Assoc. Arnautska's publication activity, which was part of the competition, is reflected in the academic reference prepared by the MU Varna Library. This represents only a small portion of her overall publication record and its impact, as measured by citations in scientific databases.**

**In the competition, the candidate participates with the following scientific works after holding the academic position of „Associate Professor” :**

**1 dissertation on "Diagnosis and prediction of canine teeth retination" published in 2013.**

**1 independent monograph "Postnatal development of maxillofacial region and prevention of orthodontic deformities" published in 2024.**

**23 real publications, 9 of them in refereed journals in world databases WOS and Scopus and 14 in non-refereed peer-reviewed journals**

**Full-text publications beyond the minimum scientific metric requirements for AP "Professor" - 5**

**Participation with lectures and oral presentations in scientific forums and congresses: national - 8 and international - 4; participation with poster presentations in 10 Bulgarian and 35 international congresses and forums**

**The candidate has submitted 12 citations, 11 of them in Scopus and Web of Science and 1 citation in a monograph with a total of 175 points**

**Impact factor after holding the academic position of Associate Professor - 3.11**

**Participation in one project under Science Fund 2020**

**Supervisor of 6 successfully defended PhD students**

**Characteristics and contributions of scientific publications**

**The research activity of Assoc. Prof. Arnautska is based on her extensive clinical experience and her direct work with PhD students and postgraduate students. Her scientific work spans various areas of dentistry and includes collaborations with specialists from diverse fields. The main contributions are discussed across 11 areas, of which I will highlight a few.**

**The monograph submitted as part of the competition, enhances the understanding of the growth and development mechanisms of the maxillofacial region by systematically addressing the development of the orofacial system and the factors that influence it, such as genetic and environmental conditions. It emphasizes the importance of early diagnosis, prophylaxis, and interceptive treatment to prevent serious orthodontic deformities. Additionally, it offers a significant practical contribution by outlining specific methods and strategies for preventing and intercepting early orthodontic deformities, including eliminating harmful habits and using placeholders. The work showcases successful clinical cases and highlights the long-term benefits of early interventions in reducing the need for invasive procedures like extractions or surgery.**

**- The incidence of dental caries (articles 7.1. and 7.4.) and the premature loss of primary teeth (articles 7.2., 8.10., 8.11., and 8.12.) as factors contributing to orthodontic deformities are discussed. The relationship between premature loss of temporary teeth, the timing of extraction, and the risk of developing malocclusions is confirmed, with consideration given to the roles of biological, orthodontic, and psychological factors. The**

**need for targeted preventive programs for children at high risk of dental caries and severe malocclusions is emphasized, particularly in rural areas, along with the importance of using space maintainers.**

**- The investigation of the relationship between TMD (temporomandibular disorders) and CMD (craniomandibular disorders) and occlusion (Articles 7.3., 8.2., and E3) reveals important findings. Based on the research, it is recommended that, for patients with suspected TMD and CMD, a clinical functional examination and structural analysis should precede prosthetic treatment to enhance the accuracy of diagnosis and treatment. Additionally, a correlation between periodontal issues, deep occlusion, and treatment (both prosthodontic and orthodontic) has been established, further deepening the understanding of the functional and structural interactions between the masticatory system and periodontal tissues.**

**- Another area of Assoc. Prof. Arnautska's research focuses on oral respiration as an etiological factor and its association with OSA (obstructive sleep apnea) (Articles 7.5, 7.6, 7.8, 7.9, 8.6, 7.7, 8.8). The confirmed link between mouth breathing and increased anterior facial height, as well as maxillary compression, has significant implications for the physiological growth of the maxillofacial system and the development of malocclusions and deformities. These findings represent important scientific and practical contributions. Of particular importance to clinical practice is the emphasis on the need for early diagnosis and referral of children showing signs of mouth breathing to ENT specialists, orthodontists or speech therapists. This is crucial for preventing future deformities and restoring muscle balance and nasal breathing. In patients with OSA, collaboration between orthodontists and otorhinolaryngologists is especially vital, with the use of oral appliances to reduce airway obstruction.**

**- The interdisciplinary approach is evident in several articles (8.3, 8.4, 8.5, 8.9, 8.7, and E1). The research underscores the importance of a combined orthodontic-surgical approach in the treatment of impacted teeth. This approach not only reduces the risk of complications but also improves the prognosis, while emphasizing the critical role of early diagnosis and intervention.**

**- A new area of research explored by Assoc. Prof. Arnautska is the relationship between posturology and orthodontic deformities (Articles 8.13, E4, and E5). The studies**

expand the understanding of the interconnections between the postural system, dentistry and vestibulology, revealing that disorders in one of these systems can lead to changes in the others. This supports the need for an integrated approach to the diagnosis and treatment of joint disorders. These publications contribute practically by demonstrating that early diagnosis of vestibular and postural disorders can prevent the development of serious pathologies and enable individualized therapeutic approaches, ultimately improving patients' quality of life.

- The contributions of the publications in the field of orthodontic biomechanics (Articles 8.14 and E2) are primarily of a practical-applied nature. They propose a strategic approach to selecting treatment techniques that are tailored to the individual patient's needs, optimizing orthodontic treatment outcomes.

#### IV. Teaching and expert activity of the candidate:

The teaching load for the past four years totals 723 hours, fully meeting the requirements for teaching activities according to the regulations of MU Varna. The hours spent working with postgraduate students and PhD candidates are not reflected in the aforementioned reference. As a scientific supervisor, she has mentored eight postgraduate students, six of whom have already completed their specialty in Orthodontics, while two are continuing their studies. Under her guidance, six dissertations have been successfully completed and defended.

During the years of her academic development Assoc. Prof. Arnautska has been giving lectures and practical classes to 4th, 5th and 6th year students, studying in Bulgarian and English.

Assoc. Prof. Dr. Hristina Arnautska has made significant contributions to the development and updating of the educational documentation for the "Orthodontics" discipline. This includes the lecture courses, programs for practical classes, as well as the syllabi for semester, state, and enrollment exams for postgraduate students and PhD candidates.

She is a regular member of the orthodontic examination committees for the 5th and 6th year students in the Bulgarian and English language programs. After obtaining the academic position of Associate Professor, she has taken a leadership role by chairing the

respective committees during the semester and state examinations. She is also a member of the State Board of Orthodontics for specialty certification.

Assoc. Prof. Arnautska also participates in scientific juries for awarding educational and/or scientific degrees and for acquiring academic positions.

She is a member of the research team for the completed project, number 20011, titled "Study of Vestibular Function Using Static and Dynamic Posturography in Patients with Craniofacial Deformities," funded by the 'Science' Fund of MU Varna. In this project, she holds the position of "Researcher" under contract reg. N: FH-4/26.01.2021.

The teaching and research activities can be summarized in the following table:

**Table 1 Fulfillment of the minimum requirements for the position of „Professor“**

<b>Group/Indicators</b>	<b>Requirements (works)</b>	<b>Requirements (points)</b>	<b>Implementation (points)</b>
<b>A/Indicator 1</b>	<b>Doctoral dissertation before Associate Professor</b>	<b>50 p.</b>	<b>50 p. Before Assoc.Prof.</b>
<b>B/Indicator 3</b>	<b>Habilitation thesis - monograph</b>	<b>100 p.</b>	<b>100 p.</b>
<b>C/ Sum indicators 5-9</b>	<b>Total publications</b>	<b>200 p.</b>	<b>242.57</b>
<b>D/ Sum indicators 10-12</b>	<b>Citations</b>	<b>100 p.</b>	<b>175 p.</b>
<b>E/ Sum of indicators from 13 to the end</b>		<b>100p. (≥ 80 p. from indicator 14)</b>	<b>245 p. (160 p. from indicator 14)</b>
<b>Total</b>		<b>550 p.</b>	<b>812.57p.</b>

V. Conclusion:

In conclusion, I reaffirm that the scientific metrics fully meet the requirements set forth by the law on degrees and titles.

**Based on the candidate's scientific work submitted for my review and analysis, as well as her overall clinical and administrative performance, I can confidently state that I support the selection of Assoc. Prof. Dr. Hristina Ivanova Arnautska for the award of the academic position of “Professor” in the specialty of Orthodontics at the Faculty of Dental Medicine, Medical University of Varna.**

**3.04.2025 г.**

**Varna**

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**Prof. Dr. Stefan Peev, PhD, DSc**

