

To the Chairman of **Scientific Jury**,
Associate Professor dr. STOYAN PAVLOV, MD, PhD,
Chief of the Department „Anatomy and cell biology”,
Determined by Order № P-109-224/26.07.2024
of the Rector at MU - Varna „Professor Paraskev Stoyanov”
„Marin Drinov“ Str. 55, 9002 - Varna

On the reason of Your Report with entry № 102-1700/17.06.2024 and a decision based on protocol № 24/08.07.2024 of the Faculty Council of the FM at MU - Varna according to art. 4, paragraph 1 and paragraph 2 of the actual Law on Development of the Academic Staff in Republic of Bulgaria, art.57, par.1 and par. 2 of the Regulations for application of LDASRB and art. 6, par. 1 and par. 2 of the present Rules of Development of the Academic Staff of MU - Varna, I have been elected as an **internal member of Scientific Jury** in a procedure for occupying the academic position „**Associate Professor**”, while according to prot. № 1/08.08.2024 of the first meeting of the Scientific Jury I have been appointed to prepare a **REVIEW** regarding the participation of **dr. DESSISLAVA MARINOVA MARINOVA, DM, PhD**, chief assistant professor at the Department „Anatomy and cell biology” of MU-Varna in a competition, announced in State Gazette № 45/28.05.2024 for occupying the academic position „**Associate Professor**” in scientific specialty „Anatomy, histology and cytology”, professional direction 7.1. "Medicine" in higher education field 7. Health and sport at the Department „Anatomy and cell biology” of MU - Varna.

Included REVIEW

by **Professor VANYA GORANOVA STEFOVSKA, MD, PhD**

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I. General description of the materials presented in the competition

Dr. Dessislava Marinova Marinova, DM, PhD is participating in the competition and has presented all necessary documents according to the requirements of LDASRB and the Rules of the Conditions and Order of MU - Varna for occupying Academic positions:

1. Application to the Rector for admission to participation in the competition.

2. Original autobiography with candidate signature.
3. Certified copy for authenticity of **EQD of Master of science in Medicine** diploma with a supplement.
4. Certified copy for authenticity of **ESD „Doctor”** diploma.
5. Certified copy for authenticity of a specialty acquired in the Healthcare field.
6. Certificate of specialty practice length.
7. Certificate of teaching practice length.
8. Teaching-load reference.
9. Medical certificate.
10. Conviction certificate.
11. Notice for personal data protection.
12. Declaration for authenticity of the documents presented, filled in and signed by the candidate.
13. Academic reference, issued by MU – Varna library, including:
 - Publications and citations, covering the minimal national requirements;
 - Full-text publications and citations except for the minimal scientometric requirements;
 - List of scientific works and citations, used for acquiring **ESD „Doctor”** and occupying **AP „Chief assistant Professor”**;
 - Application for active profiles in Google Scholar, ORCID etc.;
 - Application for Impact Factor (if present).
14. Monograph/habilitation work.
15. Declaration of author consent – only when applied with a *monograph*.
16. Abstracts of the monograph/habilitation work in Bulgarian and English language, each no less in volume of 10 standard typewritten pages (word).
17. Abstracts of the scientific works in Bulgarian and English language.
18. Reference of the original scientific contributions, signed by the author.
19. Reference of participations in national and international scientific meetings.

While considering the documentation of **dr. Marinova**, I have established a correspondence to administrative requirements for **AP „Associate Professor”**, i.e., she has the specialty in „Anatomy, histology and cytology” with the necessary teaching practice length and possesses the **ESD „Doctor”**. She is clinically healthy and unconvicted. She has received a notice for personal data protection from MU – Varna and presented declaration for authenticity of the documents with author consent.

II. Brief biographic data and professional development of the candidate

Dr. Marinova was born on July 23, 1981 in Varna, she is married and has a daughter.

In 2006 she graduated the specialty of „Medicine" with the EQD of „Master of science in Medicine" and professional qualification „Physician" from MU – Varna (diploma reg. № 7658/12.10.2006).

In 2013 she has acquired a specialty in „Anatomy, histology and cytology" (certificate reg. № 017096/07.05.2013).

In the period 2012-2014 she was enrolled as a PhD student in a self-dependent training at the department of „Anatomy, histology and embryology" of MU - Varna on the topic of dissertation „*Proliferation and differentiation of progenitor cells in the spinal cord of adult primates*", which she has successfully defended on September 26, 2014.

From 2007 to 2015 she has worked as an assistant professor in the department of „Anatomy, histology and embryology" of MU - Varna, then to now - as a chief assistant professor in the department of „Anatomy and cell biology" with a common length of specialty practice over 16 years. From 2011 to 2014 she was the person in charge of the dissection sector at the department. From 2012 to 2014 she was coordinator for 2nd course medical students of the English language programme.

Dr. Marinova is proficient in English language. She possesses high computer skills and excellent microscopic competence. She has very good leader and communicative abilities.

III. Assessment of candidate scientific works for the whole academic development

1. General characteristic of the scientific production and publication activity

The publication list submitted by dr. Marinova is including **24** scientific papers. **16** issues participate in the reference for minimal requirements of occupying AP „Associate Professor".

- Dissertation work - 1 issue;
- Monograph - 1 issue;
- Publications in scientific editions refereed and indexed in international data bases with scientific information - 9 issues;
- Publications in nonrefereed journals with scientific reference - 5 issues

One publication is presented except for the evidence material for fulfillment of the minimal requirements of occupying AP „Associate Professor".

From total 21 full-text papers 7 are presented for acquisition of ESD „Doctor" and Chief assistant professor, while **14** issues are included in the competition for occupying AP „Associate Professor". In 4 of them she is first author, in other 4 is second author and in the 6 remaining is third and subsequent author.

Table 1. Comparison of the minimal number of points by group of indicators according to the RDAS of MU – Varna for AP „Associate Professor“ and those of the candidate.

Group of indicators	№	Indicators of candidate participation	Minimal number of points	Candidate points
A (A)	1.	Dissertation work for acquisition of ESD „Doctor” – 1 issue, 2014, 130 pages, MU - Varna	50	50
B (B)	3.	Habilitation work/monograph – 1 issue, 2024, 147 pages, MU - Varna	100	100
C (Г)	7.	Publications and reports in scientific editions refereed and indexed in international data bases with scientific information – 9 issues	200	201.29
D (Д)	8.	Publications and reports in nonrefereed journals with scientific reference or published in refereed joint volumes - 5 issues		
	10.	Citations or references in scientific editions, refereed and indexed in international data bases with scientific information or monographs and joint volumes - 4 issues.	50	60
Sum			400	411.29

In summary, except for the dissertation work dr. Marinova has published 1 monograph, 1 teaching material with tests for students of the specialty „Nurse” of 80 pages (additional **15 p.**), 21 articles with total volume of 131 pages and 15 reports with total volume of 36 pages. In the competition she is participating with a total of **426.29 p. (411.29 p. + 15 p.)**, while the necessary minimal number is **400 p.**

2. Scientific topics and achievements of the candidate's works

Scientific investigations and achievements of dr. Marinova's works are mainly distributed in several fields:

A/ Nervous system and neurogenesis – 6 issues (A_1; B_3; Г_7-1; Г_7-7; Г_8-1; Г_8-2; outside-2)

The studies of the nervous system and neurogenesis field are oriented to the proliferative niches, especially to neuronal stem cells in various parts of the spinal cord by monkeys at

different ages in normal conditions. For the first time it was found a high percentage of proliferating cells expressing a phenotype of glial and neural progenitors. The results on the presence of newly generated cells in the gray matter are original with a contributing character. Such are also the results on stem-cellular niche in the zone of the central canal and the higher density of newly generated cells in the cervical segments by experimental animals of all age groups.

Original are the research data on proliferative processes in the post-ischemic cerebellar cortex of Japanese monkeys at various ages. A contributing character have the detailed analysis of the phenotype, number, distribution and dynamics of new generated cells in the layers of cerebellar cortex after ischemia that demonstrate a prevailing amount of microglia, astroglia, as well as single new neurons accompanied in parallel with degeneration of Purkinje cells. Original are also the data regarding specific location and expression of transcriptional factors Pax2 and Pax6 in different layers of the cerebellar cortex in terms of age and after global brain ischemia.

The investigations of specific zones of human embryonic and fetal dorsal pallium are original. For the first time the expression of TF Zbtb20 in the ventricular, external and internal subventricular zones of the lateral ventricle of human fetal dorsal pallium are described. Original are the results on the phenotype of Zbtb20+ cells, which are mainly radial glial stem cells. Contributive are the data regarding the presence of rostro-caudal gradient in the density of radial glial stem cells expressing Sox2/Zbtb20, as well as the data about pallium germinal zones containing Sox2+/Pax6- and Sox2-/Pax6+ cells, which are different from the majority of Sox2+/Pax6+ cells.

B/ Anatomical variations – 6 issues (Γ_7-3; Γ_7-4; Γ_7-5; Γ_7-8; Γ_8-3; Γ_8-4)

Variations play an important clinical role in specific disease manifestations, imaging diagnostics and treatment, especially the surgical one.

A very rare variation of a cross m. sternalis, a case of a multiple tendinous m. abductor pollicis longus, a variation of m. rectus superior and variations of crucial arterial vessels are reported. All these variations have a contributing character and are of interest for specific surgical and diagnostic interventions. Their knowledge allows a precise setting of diagnosis after purposeful examinations and an adequate patient treatment.

C/ Anatomical features of the human foot – 4 issues (Γ_7-2; Γ_7-6; Γ_7-9; Γ_8-5)

Anatomical variations of the human foot show significant ethnic and regional features and represent predisposing factors for a range of medical conditions. The reported results have focused on the foot anatomical features and parameters among the Bulgarian population. Contributing are the studies of a series of morphological foot indexes, relationships examined between them, as well as their connection with body constitution. Original are the substantial

studies of talus and calcaneus articular surfaces and their frequency in bone collection of the Department „Anatomy and cell biology” at MU – Varna. Definitely these scientific-practical investigations have a work significance for many specialists in that field.

3. Assessment of the monographic paper submitted

The monographic paper of dr. Marinova „*Analysis of proliferative processes in intact mammalian spinal cord*“ is an original, detailed and summarizing investigation of an extremely actual fundamental scientific problem of the current neurobiology. It represents a subsequent and logical study after her dissertation work but on a much larger scale, comprehensive and thorough research of related problems on still unresolved or disputed basic aspects mainly on postnatal neurogenesis in the mammalian spinal cord.

The goal is to summarize the available scientific information on the topic and to add new author's data with an original and contributing character.

The monographic work is helping the elucidation of some disputed and still unclear questions on the neurogenesis by defined mammals - primates and rodents in normal conditions. It especially concerns the proliferation of stem and progenitor cells, as it is pointed out on their functional role in neurogenesis, respectively neuronal and astrocyte proliferation, migration and long-term survival.

With an enviable thoroughness and systematic accuracy structural features of different proliferating cell types are described. They are mostly registered by rats and monkeys using BrdU. The main tendencies in proliferation and differentiation of principal cell types are clearly and logically outlined. The expression and colocalization of significant antigens, including specific transcriptional factors, for each of them are analyzed. Their exact location in the spinal cord is clarified and a quantitative analysis is performed. The data in this regard represent the most valuable author contribution of the study of the spinal cord neurogenesis.

4. Citations of candidate's publications in national and international literature (publication image)

According to the applied academic reference issued by MU – Varna library, two publication of dr. Marinova in scientific editions refereed and indexed are cited a total 4 times in foreign data bases.

5. Participation in scientific meetings

From 2008 to now dr. Marinova has presented the obtained results at 17 national and international scientific forums. She has participated at 8 Congresses with international participation of BAS, 3 International Symposia of CA, 1 Jubilee Symposium „50 Years Department „Anatomy, histology and embryology” at MU - Varna“, 3 National Conferences

with international participation „Morphologic days“, 1 Scientific-practical Conference of Aquatic Rescue and 1 Course of Anatomical Surgery.

IV. Complex, qualitative evaluation of candidate's pedagogical, methodical and teaching activity

Dr. Marinova has performed all practical seminars in anatomy and histology for Ist и IInd course medical and dental medicine students of the Bulgarian and English programme and CGHE for Ist course medical students of the Bulgarian programme at MU - Varna. She has conducted lecture course and exercises of „Human Anatomy“ for nurses in MU - Varna and the branches in Sliven, V. Tarnovo and Shumen, as well as practical seminars in „Human Anatomy“ for Ist course pharmacy students, lecture course and exercises for students of specialty „Dental technician“, preparatory course „Human Anatomy“ for foreign medical students. She has taken part in the examination sessions of the respective disciplines. She is a co-author of a book with tests in human anatomy for students of the specialty „Nurse“.

Based on the reference of the teaching workload it become clear that during the last 5 academic years dr. Marinova has got an average auditorium occupancy of 561 teaching hours per year (approximately half of them are in the English programme), that is considerably exceeding the norm of 360 teaching hours.

V. Critical notes and recommendations

It is known that dr. Marinova has participated in scientific projects, has specializations abroad, is a member of scientific and professional organizations, which have not been indicated. Their inclusion in the documentation would additionally shape a more complete image of her as a high class scientist and university teacher of today.

VI. General evaluation of candidate's compliance to the mandatory conditions, quantitative criteria and schientometric indicators

After a detailed consideration of the documentation provided and having done a complex assessment of the compliance with the administrative requirements, scientific-research work and pedagogical-teaching activity of the candidate for occupying **AP „Associate Professor"** in scientific specialty „Anatomy, histology and citology", I think that **dr. Marinova** not only meets the minimal mandatory requirements of all criteria, as well as the total number of points, but is exceeding some of them.

VII. Conclusion (the candidate corresponds/does not corresponds to the mandatory specific conditions and quantitative scientometric criteria for AP „Associate Professor”) and proposal for occupying the position

Dr. Marinova is a built and competent university teacher with a long-standing experience in her specialty and high scientometric indicators. She is a well prepared researcher with a wide range scientific interests and has a very good image among her colleagues and students.

As a **member of the Scientific Jury** I consider the candidate’s achievements in quantitative and qualitative aspect to fully correspond to the minimal and mandatory conditions according the LDASRB and the Rules of MU – Varna for occupying academic position **„Associate Professor”**. I give my fully convinced positive vote appealing to the other members of the esteemed Scientific Jury also to support the election of **Dr. Dessislava Marinova Marinova, DM, PhD** in the present competition and to propose her to the FC of MU - Varna for appointment and occupying the **AP „Associate Professor”** in scientific specialty „Anatomy, histology and cytology”, professional direction 7.1. "Medicine" of higher education field 7. Health and sport at the Department „Anatomy and cell biology” of MU - Varna.

28.08.2024

Varna

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679

Signature:

(Prof. Vanya Goranova Stefovskа, MD, PhD)