

STATEMENT

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Subject. A competition for acquiring a half-time position of Associate Professor in Medical Genetics, professional field 4.3 Biological Sciences, Higher Education field 4, Natural Sciences, Mathematics and Informatics, at the Department of Medical Genetics, Faculty of Medicine, and a full-time position in the Laboratory of Medical Genetics at St. Marina University Hospital EAD - Varna.

Procedural issues

By Order NoR-109-515/30.11.2023 of the Rector of Prof. Dr. Paraskev Stoyanov Medical University I was been appointed member of the Scientific Jury for the Competition for "Associate Professor" in the specialty "Medical Genetics", Professional field 4.3. Biological sciences 4, Higher Education field Natural Sciences, Mathematics and Informatics - for the needs of half-time position at the Department of Medical Genetics, Faculty of Medicine and a full-time position for the Laboratory of Medical Genetics at St. Marina University Hospital EAD - Varna, announced in State Gazette No. 83 of 03.10.2023.

One candidate has applied for the competition and has been admitted for participation – Senior Assist. Professor Dr. Maria Kostadinova Levkova, MD, Ph.D. This procedure and the relevant documents and materials submitted to me are in accordance with Art. 4, para. 1 and para. 2 of the Academic Staff Development Act in the Republic of Bulgaria, art. 57, para. 1, Art. 127 para. 1 and 2 of the Regulations for the Development of Academic Staff at the Medical University - Varna.

Education and career development

Dr. Maria Kostadinova Levkova graduated in Medicine in 2016 at "Prof. Dr. Paraskev Stoyanov" Medical University -Varna. Immediately after graduating in 2016, she started working as a part-time assistant professor in Medical Genetics at the Department of Medical Genetics, "Prof. Dr. Paraskev Stoyanov" Medical University - Varna. From 2017 to 2021 she held the position of full-time Assistant Professor, and since 2021 to present she has been a Senior Assistant Professor" at the same Department of Medical Genetics, Medical University - Varna. During the same period (2017-2021) she took a post-graduate course in medical genetics" at the Laboratory of Medical Genetics, St. Marina University Hospital – Varna, and she has a recognized specialty in "Medical Genetics". In the period 2018 – 2021, Dr. Maria Levkova is a full-time PhD student at the Department of Medical Genetics, "Prof. Dr. Paraskev Stoyanov" Medical University - Varna. In March 2021 she obtained her PhD diploma in the doctoral program in genetics, defending a dissertation on "*Molecular genetics and immunological biomarkers in medical genetic counseling of families with infertility*".

Research interests

Dr. Maria Levkova's research interests are related to research in the following areas:

- 1. Reproductive genetics:** The role of genetic factors in the etiology of male infertility - significance of pathogenic variants in dynein genes as potentially associated with cases of male infertility, possibilities of genomic tests using target panels of genes associated with male infertility, study on the 5T variant in the CFTR gene and its role as an etiological factor for impaired spermatogenesis in its carriers; Genetic factors for recurrent miscarriages - a study on polymorphic variants in genes involved in the regulation of the immune system with a potential role in the successful completion of pregnancy, the significance of various chromosomal disorders and variants of chromosomal polymorphisms among Bulgarian patients with reproductive disorders.
- 2. Pediatric genetics and dysmorphology.** The role of molecular genetics selective screening for fragile X syndrome among high-risk children with intellectual disability/developmental delay/autistic behavior to make the correct diagnosis and provide timely genetic counseling for the family. Description of clinical cases with rare diseases/syndromes.
- 3. Neurogenetics:** The role of genetic factors in the etiology of ischemic strokes - factor V Leiden (FVL), factor II prothrombin (PT), protein C (PC), protein S (PS), antithrombin (AT) as heritable predisposition factors for thrombophilia and their relevance on the risk of ischemic strokes in young adults.
- 4. Oncogenetics:** The role of small circular RNAs (circRNAs) in cancer etiology - the potential role of oncogenic circRNAs in the pathogenesis of colorectal cancer and their use as suitable new drug targets in the personalized treatment of patients with colorectal cancer, and the significance of different SNPs in genes for a particular miRNA.
- 5. Medical genetic counseling:** Specifics and problems of genetic counseling in cases with rare genetic diseases and dysmorphic syndromes.

RESEARCH ACTIVITIES

Scientific-metric indicators:

Group A

Indicator 1 - 50 points /minimum required 50 points/

- Dissertation - for awarding the educational and scientific PhD degree " - 50 points

In the academic transcript sent for participation in the competition (prepared by an official at MU-Varna) the publications for the acquisition of the PhD degree were not included. However, the additional check in the NACID database proved that the publications related to the dissertation were accessible.

- 3 publications related to the dissertation (2 of them are in journals, refereed and indexed in Scopus, 1 publication in a non-refereed journal, **27 points (minimum 30 points required for a PhD degree).**

Group B - 110 points /minimum required 100 points/

Indicator 4 - 110 points (107 points in the academic transcript)

- Habilitation thesis - 110 points (instead of 107 points indicated)

Regarding habilitation, 5 publications in refereed and indexed journals with IF or SJR, mainly investigating the role of genetic factors in the etiology of male infertility, genetic polymorphisms in colorectal cancer and genetic defects for thrombophilia as risk factors ischaemic strokes have been submitted. Of the 5 publications submitted, 4 were in IF journals (**with a total IF of 21,317**), of which 3 were in Q1 (**3×25=75 pts**) and 1 in Q2 (**20 pts**); the fifth publication was in Q3 (carrying **15 pts**, instead of the 12 pts indicated). In 3 (60%) of these 5 publications, Dr. Levkova is the first author.

Group D - 213 points /the minimum required is 200 points/

Indicator 7 - 213 points (216 points are indicated in the academic transcript)

Publications in refereed and indexed scientific journals in world-renowned databases of scientific information (Web of Science and Scopus) (**15 pts**). Of all 15 publications submitted: 4 are in IF journals (with a total IF of 7,426), which carry 75 pts (in Q2 3×20=60 pts and in Q3 1×15=15 pts); 2 are in Q3 (2×15=30 pts); the remaining 9 publications are in Q4 (9×12=108 pts). In 6 (40%) of these 15 publications, Dr. Levkova is the first author.

Group E - 50 points /minimum required 50 points/

Indicator 11 -50 points

- Citations in scientific journals, monographs and collective volumes, refereed and indexed in world-known databases of scientific information (Web of Science and Scopus) (**25 pcs.**) Nine of Dr. Levkova's publications have been cited in a total of 25 scientific journals, refereed and indexed in world-renowned databases (25pcs. × 2 pts.; **50 pts.**).

Scientific works of Dr. Maria Kostadinova Levkova and overall characteristics:

Dissertation /Author abstract

Total number of real publications in scientific publications - 25 pcs.

- ***Real publications (for obtaining PhD) - 3 pcs.***
- ***Real publications for participation in the competition - 20 pcs.***

(beyond those for the PhD)

- Publications in journals that are refereed and indexed in world-known databases of scientific information - 20 pcs.
 - Submitted as Habilitation thesis - 5 pcs.
 - Other (apart from the Habilitation thesis) - 15 pcs.
- Outside of the participation in the competition are also submitted Publications in non-refereed peer-reviewed journals - 2 pcs.

Sole or first author (in the actual 25 publications) – in 12 publications (48%)

Citations - 25

Of the scientific publications with authorship and co-authorship of Dr. Maria Levkova - 9 publications (in journals with IF or SJR) have been cited in a total of 25 scientific publications refereed and indexed in world-renowned databases (SCOPUS and Web of Science).

Impact factor (of the actual publications for participation in the competition) - total IF - 28,743

Research contributions

I approve Dr. Maria Levkova's author's report on the original contributions of her scientific research. These contributions are in different scientific fields: reproductive pathology – molecular-genetic causes for defective spermatogenesis and recurrent miscarriages; pediatric genetics and dysmorphology; neurogenetics; medical genetics counselling. The clinical cases of rare diseases presented and the problems in establishing diagnosis and risk assessment are especially valuable in terms of practical terms.

I accept the Habilitation extended reference of Dr. Maria Levkova, related to the 5 articles in the Habilitation thesis, devoted to studies in the following areas: genetic factors in the etiology of male infertility; the role of small circular RNA in the etiology of cancer (in colorectal cancer in particular); The role of genetic factors for thrombophilia in the etiology of ischemic strokes.

SCIENTIFIC ACTIVITY

Participation in scientific forums (besides those for obtaining PhD degree) - 40

- participation in international scientific forums - 27 forums
- in national scientific forums - 13 participations
- of the published abstracts - in 7 (18%) of them she was the first author

Scientific research projects - 6 projects

- Participation in National projects - 6 projects

TEACHING ACTIVITIES

Dr. Maria Levkava is a lecturer in Medical Genetics. She teaches medical students (in Bulgarian and English); pharmacy students, student nurses, for the specialties - Medicine (BEO and AEO), Pharmacy, student midwives and nurses, and student laboratory technicians.

Total teaching experience - over 6 years

CONCLUSIONS:

As can be judged by the attached documents, Dr. Maria Kostadinova Levkova, meets the scientific and metric criteria set as minimum requirements set by the Academic Staff Development Act in the Republic of Bulgaria and the Regulations for the Development of Academic Staff at the Medical University – Varna to be awarded the position of Associate Professor. She is a qualified specialist in Medical Genetics, an experienced teacher and a recognized researcher focused on scientific aspects of human genetics. She is a qualified specialist in medical genetics, an experienced lecturer and an established researcher with interests in various scientific fields of human genetics.

I give my positive opinion and confidently propose to the members of the Scientific Jury to vote for awarding the academic position of "Associate Professor" in Medical Genetics to Dr. Maria Kostadinova Levkova for the needs of the Department of Medical Genetics, Faculty of Medicine and Laboratory of Medical Genetics at the St. Marina University Hospital EAD - Varna.

14.02.2024

Signed:.....

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
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Prof. Katya Stefanova Kovacheva, MD, PhD