

TO
THE CHAIRMAN OF THE SCIENTIFIC JURY,
APPOINTED BY ORDER № 521/15.12.2022
BY THE DIRECTOR OF THE NCIPD

STATEMENT

By Prof. Stefana Sabtcheva, MD, PhD,
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University Specialized Hospital for Active Oncology Treatment, Sofia
Member of the Scientific Jury appointed by Order № 521/15.12.2022
by the Director of the NCIPD

On the Competition for the academic position "Associate Professor" in the higher education field 4. "Natural sciences, mathematics and informatics" and professional direction 4.3. "Biological Sciences". Scientific specialty "Microbiology" for the needs of the Department of Microbiology of the National Center for Infectious and Parasitic Diseases.

The only candidate who submitted documents and was admitted for participation in the competition is Chief Assistant Iva Petrova Trifonova, PhD – Head of the National Reference Laboratory "Vector-borne Infections, Leptospire and Listeria" in the Department of Microbiology of the National Center for Infectious and Parasitic Diseases (NCIPD). The procedures for opening and announcing the competition have been followed. The documents for the competition were drawn up with impeccable accuracy in accordance with the requirements of the Development of Academic Staff in the Republic of Bulgaria Act and the Regulations for its implementation for awarding and occupying the academic position "Associate professor".

I declare that I have no conflict of interest and no publications in common with Chief Assistant Iva Trifonova.

Iva Trifonova graduated from the Faculty of Biology of Sofia University "St. Kliment Ohridski", acquiring successively the educational-qualification degree "Bachelor" in Molecular Biology in 2005 and "Master" in Molecular Virology in 2007. Since 2008 she has been working at the NRL "Vector-borne Infections, Leptospire and Listeria of the NCIPD. She started as a full-time PhD student and in 2011 defended her thesis on "Optimization of serological diagnosis and studies on the pathogenesis of Lyme borreliosis with recombinant *Borrelia burgdorferi* antigens". In 2017, she received a specialty in Microbiology. Since 2021 she is in the process of acquiring a second specialty in "Clinical Virology".

In a relatively short period of time Iva Trifonova gained considerable experience in research work with vector-borne microbial agents of infectious diseases, which she successfully applied in intensive daily medical and diagnostic activities. The numerous postgraduate courses, trainings and specializations in prestigious scientific institutes in Greece, Sweden, Italy, Denmark and at the NCIPD contribute to this. With the skills and knowledge in the field of molecular genetic techniques and serological methods Iva Trifonova has been an active participant in the research teams of four projects with international funding, five with funding from the National Research Fund and one national program.

In this competition Iva Trifonova participates with 39 unreviewed scientific works, which include: an abstract of a dissertation for the scientific and educational degree "Doctor"; 37 articles in scientific periodicals, 21 of which in international and Bulgarian journals with impact factor and 16 in Bulgarian publications without impact factor; participation in 1 monograph.

It should be noted that the results of Iva Trifonova's research have been published in prestigious journals with high IF, with the total IF of the publications being 35,211. The works of Iva Trifonova have been the subject of considerable attention from the scientific community. They have been cited 73 times by Bulgarian and foreign authors in journals and books. Overall, these scientific metrics present the candidate as an established scientist with a significant contribution to the development of vector-borne infections, leptospiruses and listeria on a national and international level.

In addition to his outstanding publication activity, the chief asst. Iva Trifonova presented 82 abstracts of papers, of which 63 were presented at national and 19 - at international scientific events, evidence of their scientific importance.

The research activity of Iva Trifonova is distinguished by a clear concentration on all aspects of vector-borne bacterial and viral zoonoses in our country in the following main areas: (1) Ecological and epidemiological studies; (2) Studies on vectors of viral and bacterial transmissible infections; (3) Studies on viral transmissible infections; (4) Studies on viral hemorrhagic fevers; (5) Seroepidemiological studies on the distribution of viral hemorrhagic fevers and vector-transmissible infections in the country; (6) Studies on leptospirosis in Bulgaria; (7) Serotyping of listeriosis; (8) Studies on antibody response to synthetic peptides in Lyme borreliosis; (9) Studies on viral load in patients with COVID-19 infection.

In her work in the above-mentioned scientific areas Iva Trifonova has achieved significant original and confirmatory scientific and practical contributions, among which I would highlight the following:

1) For the first time sensitive reservoirs for the causative agents of tick-borne infections Lyme borreliosis and human granulocytic anaplasmosis have been identified by molecular genetic methods. The reservoirs of the main zoonoses in our country have also been studied.

2) Vectors of viral and bacterial transmissible infections have been studied for the first time in our country with molecular genetic methods.

3) Conventional and Real-time RT-PCR systems for detection of viruses causing transmissible infections have been introduced for the first time in the country.

4) The diagnostic capabilities of various serological tests for the detection of viral hemorrhagic fevers and the etiology of acute febrile states were investigated.

5) The first large-scale sero-epidemiological studies on the prevalence of viral haemorrhagic fevers and vector-borne infections in the country have been carried out.

6) Diagnostic methods for leptospirosis were improved.

7) Serotyping of *Listeria monocytogenes* isolates from clinical materials has been done.

8) The antibody response of patients with various manifestations of Lyme disease to four synthetic C6 peptide antigens was studied. It was found that C6 peptides from *B. burgdorferi* sensu stricto have a higher reactivity than *B. afzelii* and *B. garinii* in patients with early-onset Lyme borreliosis.

9) Viral load in patients with COVID-19 infection has been shown to be inversely correlated with serum antibody response. A correlation was found between severe clinical forms, higher viral load, higher levels of cytokines IL-1 β , IL-10 and IL-18 and IgA antibodies.


In addition, Iva Trifonova is an active participant in the teaching and learning activities of the Microbiology Department of the NCIPD, in the postgraduate training courses, consultancy, methodological and experimental-organizational activities of the enrolled graduate students with lectures, exercises and seminars with 95 hours of teaching for the last 5 years.

Conclusion

Chief Assistant Iva Trifonova is known as a respected and highly qualified specialist in the field of vector-borne bacterial and viral infectious diseases. The general analysis of her research and teaching activities testifies to a categorical compliance with the requirements of Article 27, paragraph 4 of the Development of Academic Staff in the Republic of Bulgaria Act and the NCIPD Regulations for its implementation for awarding and

occupying the academic position “Associate Professor”, while twice exceeding the minimum points required for this position (795 against the minimum 400). On the basis of all the above, I give a positive evaluation for the election of Chief Assistant Iva Petrova Trifonova for the academic position of “Associate Professor” in the scientific specialty “Microbiology” in the Department of Microbiology of the National Center for Infectious and Parasitic Diseases.

31.01.2023

Reviewer: 
/ Prof. Stefana Sabcheva, MD, PhD /