

Dr. Neli Vilhelmova-Ilieva has participated in 4 national scientific projects and conducts research under contracts with businesses (2 with Bulgarian companies and 2 with foreign companies).

2. General assessment of the applicant activity.

2.1. Assessment of scientific and applied scientific activities

Scientific papers.

The reference for compliance with the minimal state requirements in accordance with Art. 2b of the Act for the Development of the Academic Staff in the Republic of Bulgaria for HE area 4. Natural Sciences, Mathematics and, Informatics, Professional area 4.3. Biological Sciences, and the regulations of BAS as follows:

- Indicators of group A: PhD thesis - 50 p.
- Indicators of group B: habilitation work - scientific publications in journals that are referenced and indexed in research database (WoS/Scopus) - 4 publications with quartile Q1 are included. On this indicator, I find a difference between the exported information and that in the WoS/Scopus scientific database for the first publication - Vilhelmova-Ilieva, N. E al. Antiviral Research, 2014, 110: 104-11 – quartile Q1 is presented, but the reference shows that the value of the indicator for the corresponding year of the journal is Q2 . Accordingly, by group of indicators, the **B points are 95 out of the required 100 points** (3x25 points and 1x20 points). Therefore, the applicant does not meet the requirements under this indicator of the minimum national requirements.
- Indicators in group G - scientific articles in international refereed and indexed journals include 16 publications distributed by quartiles (Q1 - 4 items, Q2 - 3 items, Q3 - 2 items and Q4 - 3 items) and 4 book chapters. The quartile values of two of the articles for imprecise. About the article Zaharieva MM, Dimitrova LL, Philipov S, Nikolova I, Vilhelmova N. et al. Molecules, 2022, 27(1): 245 quartile Q1 is indicated, which contradicts the data base for the corresponding year. The article is with quartile Q2. The article with authors Varadinova T., Vilhelmova et al. Acta Virologica, 2005, 49 (4): 251-260, gives the candidate quartile Q3 rather than Q2. Therefore, publications in this indicator group carry **276 points** out of the required 200 points.

Regardless of the above-mentioned inaccuracies, the total number of points on these indicators (371 p.) are sufficient to satisfy the Minimum National Requirements in this part of them.

- Indicator E presents a list of 30 citations of 4 articles in scientific publications referenced and indexed in Web of Science or Scopus. Dr. Vilhelmova has attached 10 citations to the article - Vilhelmova, N. Et al. Antiviral Research, 89, Elsevier, 2011, 174-181, which is associated with the acquisition of the scientific degree "PhD". This is not permitted by the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria. Therefore, there are 20 tender citations submitted. They carry **40 points out of a required 50 points**. Therefore, the applicant does not meet the requirements under this indicator of the minimum national requirements.

Scientific and applied research contribution.

The candidate's contributions are in the field of screening extracts and substances of natural origin for antiviral activity in vitro and are aimed at obtaining products for use in pharmaceuticals and food supplements. Their effects on the stages of viral replication were also investigated to elucidate the mechanism of action. The combined use of active extracts and formulas with the drug Acyclovir has also been investigated.

Major scientific contributions:

1. Results were obtained for the anti-herpesvirus activity of ellagitannins and halotannins.
2. The influence of Canadian propolis extract, rose essential oils and products of their production on stages of replication of Human alphaherpesvirus type-1 (HSV-1) and their impact on extracellular virions was determined.
3. The antiviral activity of post-metabolites isolated from different lactic acid bacterial strains was established.

Major applied research and methodological contributions:

1. Determination of the influence on the replicative cycle and viability of extracellular virions of HSV-1 and Human coronavirus (HCoV-43) of extracts isolated from Bulgarian medicinal plants included in existing commercial products.
2. Determination of the virucidal activity of a commercial disinfectant gel and lotion.
3. Determination of virucidal activity of air disinfection systems.

2.2. Assessment of educational and pedagogical activity.

Educational and pedagogical activities of assist. prof. N. Vilhemova-Ilieva is associated with the training of students from the Faculty of "Public Health, Health Care and Sports" of South-West University during the academic year 2021/22.

3. Assessment of the applicant's personal contributions.

he presented scientific works and accompanying documentation from Dr. Neli Vilhemova-Ilieva, prove a personal contribution to the experimental design, analysis, interpretation and publication of the scientific results. The author's reference for the research work and scientific contributions present in detail the achievements of the candidate.

4. Critical remarks and recommendations.

The submitted evidentiary materials for satisfying the indicators in groups B and E do not meet the required number of points. I recommend refining the documentation of data from publications and citations to meet the Minimum National Requirements under Art. 2b of ZRASRB for the occupation of the academic position "Associate Professor" in Professional direction 4.3. Biological Sciences (Virology). In addition, no evidence was presented for contracts with 2 Bulgarian companies and 2 with foreign companies.

I recommend that the applicant adjusts the indicators for groups B and E in order to meet the minimum national requirements.

5. Conclusion.

Due to the fact that the formal requirements specified in the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation and the Regulations for the Terms and Conditions for Acquiring Scientific Degrees and Holding Academic Positions at the Stefan Angelof Institute of Microbiology have not been met, I give a negative evaluation and convincingly recommends to the respected scientific jury not to offer. assistant professor Dr. Neli Milenova Vilhemova-Ilieva for the appointment of the academic position "associate professor" in the field of higher education 4. Natural sciences, mathematics and informatics; professional direction 4.3. Biological sciences, virology, subject to recommendations.

09.12.2022

Expert opinion author:

Prof. Dr. Stoyan Shishkov