

STATEMENT

on the competition for the academic position of Associate Professor in the professional field 4.3. Biological Sciences (Virology - Molecular Virology), announced by the Laboratory of Virology, Faculty of Biology, Sofia University "St. Kliment Ohridski" in State Gazette No. 86 of 13.10.2023.

Candidate: Assoc. Prof. Dr. Anton Veselinov Hinkov, Laboratory of Virology, Faculty of Biology, Sofia University

Statement by: Assoc. Prof. Dr. Habil. Lyuben Ivanov Zagorchev, Department of Biochemistry, Faculty of Biology, Sofia University "St Kliment Ohridski", member of the Scientific Jury according to the order RD-38-609/14.11.2023 of the Rector of Sofia University "St. Kliment Ohridski"

General data about the applicant

In the competition for associate professor in the professional field 4.3 Biological sciences, announced by the Laboratory of Virology, Faculty of Biology, Sofia University, one candidate appeared - head asst. Dr Anton Veselinov Hinkov. All necessary documents have been submitted, on the basis of which the candidate has been admitted to the competition. Dr. Hinkov was born in 1981, graduated from higher education - Bachelor of Molecular Biology and Master of Virology at BF, SU in 2004 and 2006, respectively. In 2011 he started to work as a specialist in the Laboratory of Virology at the Faculty of Science, Sofia University, after which he successfully passed a competitive examination and successively held the academic positions of assistant professor and senior assistant professor, as which he is currently working. In 2012 he defended his dissertation for obtaining the PhD degree on "Investigation of newly synthesized styrylquinolines for anti-HIV-1 activity in cell culture", awarded by the Faculty of Biology, SU. The education and academic development of the candidate correspond to the field of the announced concourse, namely molecular virology.

Teaching experience

As a senior assistant professor, Dr. Hinkov has considerable experience in conducting practical classes in Virology, Molecular Virology and Microbiology with Virology, as well as part of the lecture course in Microbiology with Virology for the Pharmacy specialty, Master of Post-Secondary Education. There is also a supervision of 4 graduates in BSc and 9 graduates in MSc. The volume of lecture courses that is derived from the Laboratory of Virology determines the need for career advancement, which is tied to announced competitions for non-habilitated lecturers. Dr. Hinkov has accumulated the necessary experience to start lecturing courses as a tenure-track faculty member.

Meeting the minimum state requirements for the academic position of Associate Professor

For the academic position of Associate Professor it is necessary to meet points in four groups of indicators. Indicator group A requires 50 points, which are awarded upon successful

defense of the dissertation for the PhD, which the candidate proves with a diploma for the PhD awarded on 13.02.2012. Indicator group B requires 100 points awarded for a monograph or equivalent scientific publications. The candidate shall indicate five scientific publications equivalent to 100 points (Q1, 2 x 25; Q2, 1 x 20; Q3, 2 x 15). The publications are in broad collectives and although Dr. Hinkov is not the first author in these publications, his contribution is clearly evident in terms of investigating the antiviral activity of various natural and synthetic biologically active substances. Indicator group D requires a minimum of 200 points from scientific publications indexed in Web of Science and/or Scopus, with impact factor or impact rank. The applicant has identified 12 articles, which together total 206 points. Indicator group E requires 50 points from citations that are covered by 28 citations in Scopus for a total of 56 points. In conclusion, the data presented by Dr. Hinkov demonstrates full compliance with the minimum state requirements and the SU regulations for academic staff development.

Analysis of publication activity and author contributions

The candidate participated in the competition with 17 scientific publications, indicating a total of 32 scientific publications, 93 citations and participation in 13 scientific projects. The number of citations differs between the attached reference and those indicated in the CV. All publications are in the field of the competition - Virology (Molecular Virology). The Scopus reference shows 18 scientific publications, 131 citations and h-index 6. Most of the publications in indexed journals were realized in multidisciplinary teams, in journals with high impact factor, such as Journal of Medical Chemistry (IF=5.6), Phytochemistry Reviews (IF=2.9), Frontiers in Plant Science (IF=6.6), Industrial Crop and Products (IF=3.4), Journal of Applied Microbiology (IF=3), etc.

The publications from the competition were realized in the established team of the Laboratory of Virology, but in the general reference we observe publications in other scientific fields and with other teams, e.g. publications numbers 27 and 29.

The contributions are summarized in three main areas.

- I. Study of antiviral activity of natural products.** Included here are studies of antiviral activity on various strains of human herpes virus of substances isolated from lower and higher plants, invertebrates, and microorganisms. This includes, for example, antiviral activity of various extracts from the resurrection plant and Balkan endemic *Haberlea rhodopensis*, as well as from dozens of different plants with proven use in Bulgarian folk medicine, some of which show up to 80% inhibition of human herpes virus replication. The antiviral effects of fractions of the haemolymph of *Rapana venosa*, *Eriphia verrucosa* and other gastropods have also been studied, with over 99% inhibition of virion infectivity found in some cases, as well as of dozens of strains of lactic acid bacteria.
- II. Investigation of new synthetic compounds for antiherpetic effect.** In this direction, dihydroxyethylene isosteres of dipeptides Phe-Pro and Pro-Pro were investigated on recombinant AIDS virus protease, with promising results. Another avenue of investigation is modified forms of the drug Abacavir, which demonstrate low

cytotoxicity and high activity against HIV-1 virus. Esters of the nucleoside analogues ganciclovir and penciclovir have also been studied, but have shown lower activity than their unmodified analogues.

III. Investigation of the effect of physical factors on replication and extracellular virions of HSV 1. For the first time worldwide, the effect of surface-wave non-equilibrium gas-discharge plasma treatments on antiviral and virocidal activity was investigated. Human herpes virus was used. In a study of the virucidal effect of a plasma-treated virus suspension diluted 1:2 with dH₂O, a decrease in virus titer was found in the viral sample, relative to a control of 1.67.

The presented publications and the author's reference for their contribution demonstrate the active scientific research activity of Dr. Anton Hinkov, as the main experimenter in the team of the Laboratory of Virology at the Faculty of Biology of Sofia University. His active work in several areas undoubtedly contributes to the scientific output and international visibility of the faculty.

Conclusion

In conclusion, I believe that Dr. Anton Hinkov presents an adequate candidacy for the announced competition for Associate Professor, which satisfies the minimum state requirements under the Law on Research and Development and its implementing regulations. The candidate is an established scientist and teacher with practical experience and the potential to develop scientifically and experimentally. I confidently recommend that the Scientific Council of the Faculty of Biology of the University of Sofia vote positively for the selection of the PI. Dr Anton Hinkov for the academic position of Associate Professor in the professional field 4.3 Biological Sciences (Virology - Molecular Virology).

02.02.2024 г.

Sofia / Associate Professor Lyuben Zagorchev/