БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ
И-Т ПО ЕКСПЕРИМЕНТАЛНА МОРФОЛОГИЯ, ПАТОЛОГИЯ И АНТРОПОЛОГИЯ С МУЗЕЙ
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СОФИЯ

Attitude of Reviewer

by Professor Nina Atanassova, PhD, DSc,
Corresponding Member of Bulgarian Academy of Sciences
Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences

Re: competition for the academic position „ASSOCIATED PROFESSOR“ in the Professional field 4.3. Biological Sciences, specialty "Virology" in the Department "Pathology" of the Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences, announced in the Newspaper of State no. 59/16.07.2021

Assistant Professor Ani Krasimirova Georgieva is the only candidate in the announced competition for the occupation of the academic position "Associated Professor" in the Department " Pathology " of the Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences. She presents detailed documentation of an active and promising scientists with indisputable indicators for academic promotion.

Assistant Professor Ani Georgieva started working in 2002 at the Institute of Experimental Pathology and Parasitology of the Bulgarian Academy of Sciences, where she completed a full-time doctorate (2004-2007). She defended a dissertation for the acquisition of PhD degree at the Institute of Experimental Morphology, Pathology and Anthropology with Museum in 2014 entitled "In vitro and in ovo models of chemical and retrovirus-induced carcinogenesis" in the specialty of current competition. In 2012 she was appointed academic position of "assistant" at the same institute, where in 2016 she was promoted Assistant Professor.

Dr. Georgieva's scientific production includes 40 publications, 5 of which are part in the dissertation for PhD degree. The candidate participated in the current competition with 35 scientific articles, of which 24 were published in journals indexed in Web of Science and SCOPUS and 11 in journals not indexed in these databases. Twenty one articles with a total IF of 34.123 were published in journals with Impact Factor. According to criteria of Web of Science and SCOPUS, the articles are distributed in the following quartiles: 5 articles with Q1; 5 articles with Q2; 8 articles with Q3; 3 articles with Q4. The international journals with IF in which the scientific works of Dr. Georgieva have been published are: Biomedicines, Journal of Ethnopharmacology, Materials Science and Engineering: C, Bioorganic & Medicinal Chemistry, International Journal of Biological Macromolecules, Journal of Materials Science: Materials in Medicine, Diversity, PeerJ, Biotechnology & Biotechnological Equipment. Bulgarian journals with IF in which Dr. Georgieva have published her papers are Comptes rendus de l'Académie bulgare des Sciences and Bulgarian Journal of Veterinary Medicine. In half of the articles the candidate has leading position (1st and 2nd author), that indicates her personal contribution. It is obvious that she is a team-worker who is able to organize a scientific group for interdisciplinary research.

A list of 74 participations in scientific forums is presented, of which 42 national and 32 international events.

The list of citations of Dr. Georgieva includes 93 citations of 13 publications and h index 6 according to SCOPUS.

The scientometric analysis of the research activity clearly indicates that she meets the criteria/requirements of the Regulations on the terms and conditions for obtaining scientific degrees and for academic positions in IEMPAM. According to indicators "G" and "D" Dr. Georgieva exceeds the required minimum according to the regulations of IEMPAM-BAS. For example, according to indicator "G7" (*Scientific publications in journals refered and indexed in Web of Science and Scopus, that are not included in the habilitation thesis*), which requires at least 220 points, she has 281 points; according to indicator D (*citations*, requiring minimum of 60 points) she has got 186 points.

Dr. Georgieva's research activity has a clearly defined profile in the field of virology, oncovirology and experimental oncology with fundamental importance and potential for application in medicine and pharmacy. Her research is focused on development of new approaches and strategies for prevention and treatment of cancer diseases and elucidation of the factors and mechanisms responsible for initiation and development of neoplastic processes. In her research, Ani Georgieva is competent in a wide range of methods in the field of molecular and cellular biology, virology and pathomorphology. She applies an innovative integrated approach to study the biological activity and safety of various chemical compounds in *in vitro*, *in ovo* and *in vivo* model systems. Dr. Georgieva conducts tests to evaluate the effectiveness of natural products, newly synthesized chemical compounds and new nanostructured materials with potential application in the treatment of neoplastic and virus-induced diseases

In the field of virology, an innovative molecular biological approach has been introduced to study the genetic and species diversity of viruses in honey bees in Bulgaria and to elucidate their phylogenetic origin and possible routes of their geographical distribution. A new Grafi virus-induced myeloid tumor cell line in a hamster has been developed to evaluate the effectiveness of antitumor drugs.

Most of Dr. Georgieva's research is interdisciplinary ant it aims the characterizition of antitumor activity of newly synthesized chemical compounds and natural products that generated scientific achievements with high clinical potential for treatment of cancer of mammary gland, colon and cervix. New compounds (anthracene-containing α-aminophosphonates, alkylphosphocholine erufosine) have been proposed with high perspective in the design of new antiviral and antitumor drugs that have low cytotoxicity and do not show genotoxicity and carcinogenicity. The antineoplastic activity of hemocyanins isolated from molluscs has been proven and they are the basis for the development of new therapeutic agents for the treatment of colorectal cancer. Data for newly developed materials used in the local treatment of tumors and wounds are of great clinical importance - they are nanostructured polymeric materials with different designs, obtained by electrofibration and loaded with biologically active substances of natural origin (curcumin, ferulic acid, caffeic acid). In these interdisciplinary research, Dr. Georgieva works successfully with colleagues from the Institute of Polymers and the Institute of Organic Chemistry with Center in Phytochemistry.

Dr. Georgieva is participant in a number of projects funded by National Research Fund (8 projects), Medical University - Sofia (2 contracts) and the National Research Program "BioActiveMed"; The Operational Programs "Human Resources Development" and "NOIR" of the ESF-Ministry of Education and Science (2 contracts). She was the coordinator of 1 contract financed by NSF.

Conclusion:

Based on the materials presented in the current competition, I find that Assistant Professor Ani Krasimirova Georgieva, PhD is an active and promising scientist, specialist in the field of virology, oncovirology and experimental oncology. As a result of her research, fundamental and applied scientific achievements have been obtained that are of great importance for medicine and pharmacy. The candidate conducts interdisciplinary research with scientists in medical chemistry, which corresponds to modern trends in biomedicine. Dr. Georgieva's scientific production has high scientometric indicators that significantly exceeds the criteria in the Regulations of IEMPAM-BAS for obtaining the academic position "Associate Professor". Dr. Georgieva demonstrates active project activity in which she has shown her skills to work in a team. I believe that Assistant Professor Dr. Ani Georgieva fully meets the requirements of the Regulations for obtaining the academic position of "Associate Professor" in "Virology" for the needs of the Department of Pathology at IEMPAM-BAS, namely the Law on Academic Promotion of the Academic Staff of the Republic of Bulgaria, and the Regulations of IEMPAM-BAS for conditions and procedure for acquiring scientific degrees and for obtaining academic positions. All these, gives me sufficient grounds to convincingly recommend to the Scientific Jury to vote positively for the proposal to the Scientific Council of IEMPAM, Assistant Professor Dr. Ani Krasimirova Georgieva to be elected "Associated Professor" in the scientific specialty 01.06.13. "Virology".

21.11.2021

Sign: .....

(Prof. Nina Atanassova, DSc)