

POSITION

from

Prof. DSc Ivan Atanasov

AgroBioInstitute, Sofia, 8 Dragan Tzankov blvd

on the materials presented by

Assoc. Prof. Dr. Petya Ivanova Pavlova

for participation in the competition for the occupation of the academic position of 'Professor' of Institute of Oceanology - BAS, in higher education: 4. Natural sciences, mathematics and informatics, professional field: 4.3. Biological sciences, scientific specialty: 'Hydrobiology' with scientific direction: 'Genetics of Hydrobionts. The competition is announced in the State Gazette, issue. 12 / 03.02.2023 and on the website of Institute of Oceanology – BAS.

1. General presentation of the procedure and the applicant

By Order No. 99 от 03.04.2023 by the Director of the Institute of Oceanology - BAS /IO-BAS/ has been appointed as a member of the Scientific Jury of a competition for the academic position of 'professor' in the field of higher education: 4. "Natural Sciences, Mathematics and Informatics"; professional direction: 4.3. "Biological Sciences"; scientific specialty: "Hydrobiology" with scientific direction: "Genetics of Hydrobionts" for the needs of IO-BAS.

Only one candidate participated in the announced competition for "professor": Associate Professor Dr. Petya Pavlova Ivanova from the Institute of Oceanology - BAS.

The set of materials and documents for participation in the competition presented by Assoc. Prof. Dr. Petya Ivanova fully complies with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of the ZRASRB and the relevant Regulations on the conditions and procedures for acquiring scientific degrees and for occupying academic positions at the BAS and the Rules for the terms and conditions for acquiring educational and scientific degrees and for occupying academic positions at the Institute of Oceanology - BAS.

Assoc. Prof. Dr. Petya Ivanova was born in 1969. In 1993, she received the Master's degree in biology, majoring in hydrobiology and water conservation, from the Faculty of Biology, SU "St. Kliment Ohridski", after defending a diploma thesis "Genetic polymorphism of myogens and muscle esterases in the Black Sea flounder *Trachurus mediterraneus ponticus*" developed in cooperation with the Institute of Fish Resources - Varna. In 2003, he defended his thesis on "Taxonomy and population infrastructure of some species of the families Cobitidae, Atherinidae and Clupeidae (Pisces) in Bulgaria" and obtained the scientific and educational degree "doctor" in hydrobiology from the Institute of Zoology, BAS. During the period 1993-2010, Assoc. Prof. Dr. Ivanova worked as a researcher at the Institute of Fisheries Resources - SSA /IRR-SSA/, Varna, where she was successively an assistant professor. III st. of 1993, and I degree from 2000 and associate professor from 2007. During the period 2004 - 2010, associate professor Dr. Ivanova was the head of the section "Ichthyology" and the laboratory of "Population genetics" at the IRR-SSA, and in the period 2007 -

2010 and Deputy Director of IRR-SSA. Since 2010, Dr. Petya Ivanova has been an associate professor at the Institute of Oceanology - BAS, Varna, where she has been a member of the Institute's Scientific Council since 2015 and Scientific Secretary for 2015. She speaks foreign languages, incl. very good command of English and Russian and use of German. Assoc. Prof. Dr. Ivanova participated in a number of courses and specializations for new experimental methods and approaches (Course in Bioinformatics, Zoological Station "Anton Dohrn", Naples, Italy; International Course in Bioinformatics, Sofia; Specialization in the Institute of Animal Physiology and Genetics, Czech Republic. Course Molecular and Biochemical markers in wetlands Eco-Toxicology, BAS Sofia; Course Fishery forensic genetics workshop, Istanbul; Specialization in Molecular Biology Group, INRB, Lisbon, etc.). Assoc. Prof. Dr. Petya Ivanova has in-depth knowledge and extensive experimental experience in a number of areas of hydrobiology, including the application of modern molecular genetic methods in a wide range of research including taxonomic studies, analysis and assessment of population structure and biodiversity of natural populations and their exploitation. He has very good computer skills, which he successfully applies in a wide range of research. In his career development so far, he has demonstrated excellent organizational and teaching abilities, including management and implementation of a large number of national and international projects (56 projects in total), as well as supervision of 2 master's degrees and 2 doctoral students.

2. General characteristics of the applicant's activities and achievements

Research activities and achievements

The materials presented by Assoc. Prof. Dr. Petya Ivanova for the announced competition for "professor" include a total of 51 scientific publications (9 in indicator C and 42 in indicator D) author, of which: 31 publications in scientific journals with IF, as well as separately 1 book chapter and 3 scientific and technical reports with ISBN. The high level of the candidate's scientific publications is also supported by the large number of their citations in publications of other researchers, a total of 373 citations of which 273 are in journals indexed in Web of Science or Scopus. The presented scientific works and citations exceed the requirements and are fully sufficient for holding the academic position of "professor" according to the criteria specified in the PRAS of the BAS. Examining the previous research activity of Assoc. Prof. Dr. Ivanova, her participation in national (total 29) and international (total 27) projects should be highly appreciated, of which she is the head or coordinator of a significant part of them (total 6 international and 9 national projects).

The main results of the scientific research activity and the scientific contributions of Assoc. Prof. Dr. Ivanova under the current competition are in three main directions including: /1/ Research on the biogeographical distribution of endemic fish species and the phylogenetic relationships including studies of different basins (Black and Caspian sea, Northeast Atlantic, Mediterranean) and fish species (*Rutilus frisii* and species of the genus *Atherina*). /2/ Determination of molecular genetic markers suitable for identification of parental species and hybrid biotypes in species of the genus *Cobitis*, as well as application of such markers for precise determination of taxonomic affiliation of marine hydrobionts and assessment of biodiversity in *Pomatoschistus marmoratus*, *Umbra crameri*, *Knipowitschia longicaudata*, *Knipowitschia caucasica*, and species of the genus *Alosa*, *Symphodus* (*Crenilabrus*), *Ctenolabrus*, etc. /3/ Application of genetic and morphometric markers to assess the population-genetic structure of various types of fish, some of which are the subject of economically

significant catches (*Scophthalmus maximus*, *Sarda sarda*, species of the genus *Barbus*, etc.) contributing to accurate stock assessment, implementation of effective fisheries management and species conservation measures. It should be noted that a large part of the results of the research activity of Assoc. Prof. Dr. Ivanova also have an important application for tracking the trends of changes in the values of a set of biological parameters and assessing the ecological state of fish populations in different basins, incl. and in NATURA 2000 areas. Another important scientific and scientific-applied aspect of Assoc. Prof. Dr. Ivanova's activity is participation in systematization and updating of available information regarding the species composition of the Black Sea ichthyofauna and assessment of ichthyological biodiversity, including assessment of the development of invasive and alien species, as well as the development of mariculture in the country in order to reduce the anthropogenic pressure on natural fish populations.

The presented overall scientific output and research and applied results indicate that Assoc. Prof. Dr. Ivanova is a researcher with broad and in-depth knowledge, extensive experimental experience, proven skills, achievements and capacity to successfully conduct complex research in the field of hydrobiology, molecular genetics of hydrobionts, as well as application of a wide range of experimental molecular genetic methods and approaches.

Applicant's teaching and organizational activity

The submitted materials for the competition show that, along with the scientific research activity, Assoc. Prof. Dr. Ivanova also has an intensive teaching and organizational activity, including: supervision of the diploma theses of two masters at SU "St. Kl. University of Ohrid and Thrace - St. Zagora, supervision and co-supervision of two successfully defended doctoral students at the Institute of Oceanology - BAS and conducting exercises with students at the Technical University - Varna. Assoc. Prof. Dr. Ivanova is also the co-author of a university textbook "Practical guide for exercises in ichthyology: microinvasive methods for field and laboratory studies of fishes". The previous activity of Assoc. Prof. Dr. Ivanova includes participation in three juries for academic growth and the awarding of 'Doctor' and Doctor of Science', reviews of more than 55 scientific publications in a wide range of scientific journals, participation in the editorial boards of Journal Marine and Life Sciences, Journal GenAqua, Journal Natural and Engineering Sciences, Journal of Limnology and Freshwater Fisheries Research, as well as participation as an editor in special issues of the scientific journals Frontiers of Marine Science, Advances in Research and Technologies and Journal of Marine Sciences and Engineering. Assoc. Prof. Dr. Ivanova is a member of a number of national and international organizations of scientists and a representative for Bulgaria in the European Reference Genome Atlas (ERGA). In different periods of her career so far, Assoc. Prof. Dr. Ivanova has been the head of a section and deputy director of IRR-SSA, as well as scientific secretary and member of the Scientific Council of IO-BAS. The mentioned facts from the teaching and organizational activities of Assoc. Prof. Dr. Ivanova show that she actively works to raise the prestige of the Institute of Oceanology - BAS. Assoc. Prof. Dr. Ivanova has rich and successful experience and proven capacity to teach and supervise the work of students from master's programs and doctoral students in the field of hydrobiology and genetics of hydrobionts, which is mandatory and of high importance for the occupation of the academic position of 'professor' under the current competition.

3. Critical comments and recommendations

I have known Assoc. Prof. Dr. Petya Pavlova Ivanova for more than 10 years and I have direct positive impressions from certain parts of her research activities during this period, indicating that she is a researcher with broad scientific knowledge, always looking for new scientific challenges, application of new experimental methods and opportunities for application and implementation of new research and applied projects, which is the basis for her successful current and subsequent academic career and development. I have no critical comments on the submitted candidacy of Assoc. Prof. Dr. Petya Ivanova for the academic position of 'Professor' at the Institute of Oceanology - BAS.

Conclusion:

After reviewing and analyzing the materials submitted to me in the competition, I consider that:

/1/ I'm convince Assoc. Prof. Dr. Petya Pavlova Ivanova fully meets the requirements of ZRASRB and the requirements specified in the Regulations of the BAS;

/2/ I give an excellent assessment of the overall research, teaching and organizational activities of Assoc. Prof. Dr. Petya Ivanova;

/3/ I believe that the scientific-research profile and teaching experience of Assoc. Prof. Dr. Petya Pavlova Ivanova fit perfectly and will significantly contribute to increasing the quality and efficiency of the overall scientific-research, applied and training activities at the Institute of Oceanology - BAS.

In view of the above, I strongly recommend to the Scientific Jury, that Assoc. Prof. Dr. Petya Ivanova be selected as "Professor" in the field of higher education: 4. Natural Sciences, Mathematics and Informatics, Professional Degree: 4.3. Biological Sciences, scientific specialty scientific specialty: 'Hydrobiology' at the Institute of Oceanology – BAS..

29.05. 2023
Sofia

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Prof. DSc Ivan Atanassov