

## Statement

for the competition for the Academic position "Associate Professor"

at the Institute of Oceanology "prof. Freitof Nansen", BAS, Varna, published in State Gazette no. 61 / 02.08.2019 by Higher education field: code 4. "Natural sciences, mathematics and informatics", Professional area: code 4.3. "Biological Sciences", "Scientific Specialty: "Botany"; Scientific direction: "Algology (diatomology)", to the section "Biology and ecology of the sea".

from Corr.memb. Prof. DSc Dimitar Asenov Ivanov

Institute for Biodiversity and Ecosystem Research, BAS, Sofia, designated in accordance with Order No. 252 / 01.10.2019. of the Director of IO-BAS as a member of the Scientific Jury.

For participation in the announced competition in the above mentioned scientific specialty "Botany"; Scientific direction: "Algology (diatomology)" for the needs of the section "Biology and ecology of the sea" has submitted documents one candidate - Dr. Ralitsa Petrova Zidarova.

### 1. Brief introduction of the applicant

The only candidate for the announced competition, Dr. Ralitsa Petrova Zidarova, has completed higher education (Master's degree) at Sofia University "St. Kliment Ohridski" in 2001 with a specialty in biology. After graduation he worked as a specialist biologist at the Institute of Botany at the Bulgarian Academy of Sciences (2001-2002). From 2003 to 2006 he was a full-time PhD student at the Faculty of Biology, Sofia University. Kliment Ohridski", where he defended his doctoral thesis in 2008 on the taxonomic composition, ecology and distribution of algae from Livingston Island, South Shetland Islands, Antarctica. She works as Chief Assistant in Botany at the Faculty of Biology, Sofia University "St. Kliment Ohridski" from 2011 to 2017, and from 2018 she is a biologist at the Institute of Oceanology of the Bulgarian Academy of Sciences.

Dr. Zidarova is the leader of two projects with national funding and participant in a number of other projects. She is an expert in the assessment of the status of surface flowing waters under the phytobenthos parameter, has experience in algae cultivation, experience in laboratory physiological and biochemical studies of algae, and has teaching skills, including: lectures, practical classes and summer teaching internships in compulsory courses at the Faculty of Biology, Sofia (Structure and Biodiversity of Plants and Mushrooms, Systematics of Algae and Fungi, and Botany). She has participated in 6 scientific expeditions to Antarctica (2004-2018), and possesses high-level computer skills, as evidenced by the methods and data processing applied.



It is worth noting that Ralitsa Zidarova is the recipient of the L'Oréal-UNESCO Award for Women in Science Award at the national level for 2012.

## **2. General description of the submitted documents for the competition**

Dr. Ralitsa Zidarova has presented a complete set of materials for the competition, in accordance with the requirements of the ZRASRB and the Rules for its implementation, as well as according to the Rules of the IO-BAS. The Commission for the Admission of Documents to IO-BAS also did not find any inconsistencies and reported a complete set of materials.

## **3. Evaluation of scientific works and contributions**

### ***3.1. General characteristics of scientific production and publication activity***

Dr Ralitsa Zidarova participates in this competition with a total scientific output of 41 publications, 22 of them in Impact Factor (IF) publications (according to the List of Publications), of which 20 are submitted for participation in this competition, participate in scientific conferences - 32 (26 of them abroad). The reported H-index is 6, which is also a very good indicator.

The works that are necessary to cover the required minimum under the ZRASRB and the Regulations for its implementation are: according to the indicator A1 50 points from the dissertation work for the acquisition of the PhD; by group of indicators B 120 points (necessary 100 points); by group of indicators D - 249 (200 points required) and by indicator D (citations) - 120 points (with a minimum of 60 points required). The candidate participates in this competition with very good scientometric indicators.

All the scientific papers presented are precisely crafted and present a clearly outlined profile of a researcher in the field of botany (algology). They are fully in tune with the theme of the competition.

### ***3.2. Research activity***

The scientific papers submitted by the candidate for participation in this competition are fully in line with the theme of the competition - professional field 4.3. "Biological Sciences", scientific specialty "Botany". Dr. Zidarova's major scientific contributions are presented in 3 groups: 1) scientific contributions of worldwide importance to the taxonomy, biodiversity, and biogeography of diatoms from Antarctica; 2) scientific and applied scientific contributions of national importance; and 3) others: contributions to educational activities.

Research on taxonomy, species diversity, and biogeography of Antarctic diatomaceous algae is the most significant part of R. Zidarova's research following the acquisition of the Ph.D. Despite numerous taxonomic studies in the twentieth century, the newly discovered and newly minted Antarctic diatom species are almost completely absent. In this field are actually the biggest contributions of Dr. Zidarova - 90 new species were described and 2 taxonomic combinations were made.

It is worth to mentioned the following main contributions:

- a large-scale revision of all diatoms in the Antarctic materials studied and newle analyzed materials;
- modern taxonomic identification methods have been used;
- revision of materials published so far have been done.

An indisputable contribution to the biodiversity of Antarctic diatoms is the clear identity of a large number of previously incorrectly identified Antarctic species reported under the names of European or North American taxa.

An important contribution is the elucidation of the actual diversity of diatoms in the Antarctic marine area, as well as the real species richness in the different diatom species in it.

For the first time the biodiversity of marine benthic diatoms along the coast of Livingston island has been reported. A significant diversity of 127 species has been identified and a clear distinction is made between habitats: (a) lithothelms, (b) natural and artificial solid substrates, and (c) bottom sediments, by species composition.

### ***3.3. Citation of publications in national and foreign literature***

The quality of scientific output is the quotation. The total number of citations of Ralitsa Zidarova's works is 147, where 97 of them are in IF journals, and 60 are in Scopus, with which she participates in this competition. This is an excellent indicator for the candidate.

### **4. Critical notes and recommendations**

Here, I would like to ask the candidate, to what extent is the claim made in the contributions that "colonization processes in Antarctic marine benthic algae have been traced worldwide for the first time?" Is it really a worldwide process that was traced? Her research is about two localities, from one island near Antarctica. Of course, these are pioneering studies, with a wealth of facts that have been established for the first time in the world, with enormous taxonomic work and the description of new species. But, is this model confirmed by other authors in other areas?

In general, the works of Ralitsa Zidarova present new facts and are made with a high degree of precision and accuracy, and I have no comment on them.

### **5. Overall assessment of the applicant's eligibility under the terms of the competition**

The candidate Dr. Ralitsa Petrova Zidarova covers all the mandatory conditions and scientometric indicators for occupying the academic position of Associate Professor at IO-BAS, as evidenced by the submitted documents and accompanying materials and scientometric references. All minimum job requirements are covered. In conclusion, I would like to say that I unequivocally support the selection of the candidate and I would recommend to the members of the distinguished scientific jury to vote for the award of the academic position "Associate Professor" to Dr. RALITSA PETROVA ZIDAROVA.

Date: 28.11.2019

Signature

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Sofia

Prof. D. Ivanov