**OPINION**

**by Prof. Dr. Stoyan Angelov Shishkov,**

**Faculty of Biology, Sofia University "St. Kliment Ohridski"**

**REGARDING: the materials submitted for participation in a competition for the academic position of "Professor" in the field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.3. Biological sciences, scientific specialty "Molecular gnetics", for the needs of the Institute of molecular biology "Acad. R. Tsanev", BAS, announced in the state gazette, issue 16/ 10.02. 2026**

**General presentation of the procedure and the candidate.**

Associate Professor Dr. Galina Simeonova Radeva participated as the only candidate in the announced competition. G. Radeva was born in 1961 in Sofia. In 1984, she graduated as a master in "Molecular and Functional Biology" with a specialty "General and Industrial Microbiology with Virology" at the Faculty of Biology of Sofia University "St. Kl. Ohridski". In 1995, she obtained the educational and scientific degree "Doctor", scientific specialty "Molecular Genetics" at the Institute of Molecular Biology, BAS. In 2010 she was elected as a Senior Research II degree/Associate Professor.

She started working in 1984 at the Institute of Molecular Biology "Acad. R. Tsanev", Bulgarian Academy of Sciences as a biologist. Since 2001, she has successively held the positions of research assistant II degree, research assistant I degree and Senior Research Fellow/Associate Professor.

The provided set of materials is in accordance with the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDACRB), the Regulations for the Implementation of the LDACRB and the Regulations for the Development of Academic Staff of the Institute of Molecular Biology "Acad. R. Tsanev", BAS in Professional Direction 4.3. Biological Sciences.

Associate Professor G. Radeva is a co-author of 91 scientific publications. As of June 2026, Scopus reflected 20 articles co-authored with the candidate, cited over 1100 times and h-index 6.

For participation in the competition, Associate Professor Radeva has submitted 20 scientific articles, which are referenced and indexed in the global scientific databases Scopus

and/or Web of Science, as well as a book chapter. The documentation allows for the assessment of the candidate's scientific and applied scientific activity, according to the accepted qualitative and quantitative criteria. There are no signals of plagiarism.

The results of Assoc. Prof. Radeva's research activities have been reported at 32 international and 17 national scientific forums, submitted for participation in the competition. They reflect her in-depth research activities in the professional field of the competition.

**Overall assessment of the candidate's activity.**

1. Assessment of scientific activity.

*Scientific works.*

The report on the fulfillment of the minimum national requirements under Art. 2b of the LDACRB for the scientific field 4. Natural sciences, mathematics and informatics, professional field 4.3. Biological sciences shows a set of points as follows:

• Indicators in **group A**: dissertation work - **50 points**.

• In indicators in **group B** "Habilitation work - scientific publications in publications that are referenced and indexed in world-renowned databases of scientific information (Web of Science or Scopus) are included 6 publications with quartiles. Accordingly, for group B indicators, **the points are 125** with a required 100.

• In indicators in **group C** - scientific articles in international referenced and indexed journals, 15 publications with quartiles are included, as is a book chapter. Publications in this group of indicators carry **278 points** with a required 200 points.

• In indicators from **group D**, a list of 210 citations of 13 articles in scientific publications, referenced and indexed in Web of Science/Scopus is presented. They carry **420 points** with a required 50 points. Therefore, the candidate meets the requirements for this indicator of the minimum national requirements.

• The indicators from **group E** include two doctoral candidates who have defended their dissertations; as well as participation in 12 national scientific projects, being the leader of 5 of them.Assoc. Prof. Radeva has also participated in 3 international projects, 2 of which she led.

The financial resources attracted for 4 of the projects led by the candidate are over 330,800 BGN. Therefore, this group of indicators carries another **420 points** with 150 points required.

**The total number of points for the indicators of Associate Professor G. Radeva is remarkable – 1279 points with 600 points required to meet the Minimum National Requirements.**

The candidate's indicators also meet the Regulations for the development of the academic staff of the Institute of Molecular Biology, BAS.

*Analysis of scientific contributions.*

The published research falls within the scope of the announced competition. They are related to the study of soils contaminated by the mining and metallurgical industries, as well as tailings ponds and relate to several thematic areas: taxonomy of microbial communities in anthropogenically affected soils and arable lands; functional potential of the identified microorganisms and the influence of abiotic factors on the diversity of microbial communities.

The main fundamental scientific and applied scientific contributions that I highlight are:

1. The identification of metal-resistant bacterial strains that can be used for soil remediation.

2. The enrichment of the global GenBank database with 265 sequences of the 16S rRNA gene identified in soils contaminated with heavy metals.

3. The determination of the bacterial divisions Proteobacteria, Acidobacteriota and Actinobacteriota as key for soils contaminated with radionuclides and heavy metals.

4. Assoc. Prof. Radeva also identified resistant, tolerant and sensitive major fungal taxa in soil samples contaminated with heavy metals.

5. The functions of bacterial communities were predicted and metabolic pathways associated with efflux pumps involved in the detoxification of cells from heavy metals in heavily contaminated soils were identified.

6. The demonstration that the Biolog system EcoPlate™ is an effective method for assessing functional changes in bacterial communities as a result of long-term stress in soil pollution.

7. Identification of dehydrogenases, beta glucosidase and alkaline phosphatase as the most sensitive to heavy metal concentration and environmental changes.

8. Evidence of the impact of organic matter, nitrate ions, soil moisture and texture as modifiers of the outcome of heavy metal intoxication of soil microbial communities.

9. Identification of new natural antibacterial agents isolated from snails and crustaceans with potential biomedical applications.

*Assessment of the candidate's personal contribution.*

The presented scientific works and accompanying documentation prove the leadership, personal contribution to the experimental development, analysis, interpretation and publication of the scientific results of Associate Professor Radeva. The author's reference for the research work and scientific contributions present in detail the fundamental scientific and scientific-applied achievements of the candidate and I accept them without reservation.

2. Other activities.

She is a scientific supervisor of 2 defended doctoral students. She is also the supervisor of 8 defended graduate students in the Master's and 2 in the Bachelor's degree programs.

Assoc. Prof. Radeva has been the Chair of the Institute's Scientific Council since 2014, as well as the person responsible for supervision and safety of work with GMOs. She was a member of the General Assembly of the Bulgarian Academy of Sciences 2019-2020.

**Critical comments and recommendations.**

The presented documentation and evidentiary materials are proper, comprehensive and reliable, therefore I have no comments or recommendations.

**Conclusion.**

**The scientific papers and documents submitted by Assoc. Profr Galina Radeva for participation in the competition for the academic position of "Professor" " meet Law on the development of academic staff in the Republic of Bulgaria (LDACRB), the Regulations for the implementation of the LDACRB and the Regulations for the development of academic staff of Institute of molecular biology. She has submitted a sufficient number of scientific papers for participation in the competition, which have received recognition from the international scientific community. The candidate's**

**research activity has led to original fundamental scientific and scientific-applied contributions.**

**The materials provided undoubtedly outline Associate Professor Galina Simeonova Radeva Ph.D. as an excellent creative researcher and skilled experimenter of the highest level and with creative capabilities in the field of soil microbiology. I believe that the facts presented are an indisputable basis for her election as a professor in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.3. Biological Sciences, scientific specialty "Molecular Genetics" by the Яcientific council of the Institute of Molecular Biology "Acad. R. Tsanev", BAS. I give a positive rating.**

15.06.2026 Signed by:

Prof., Dr. Stoyan Shishkov