

## OPINION

by Prof. Petko Denev, PhD - Institute of Organic Chemistry with Centre of Phytochemistry,  
BAS

member of the scientific jury according to order № I-31/29.03.2021 of the Director of  
Institute of Microbiology (IMicB), BAS

Concerning: materials submitted for the competition for the academic position “Associate professor” in the field of higher education 5. Technical sciences, professional field 5.11. Biotechnologies (technology of biologically active substances) for the needs of the laboratory "Metabolomics", Department of Biotechnology, IMicB-BAS.

### **1. General presentation of the candidate and the materials received in the competition**

In the competition for the academic position "Associate professor" in the field of higher education 5. Technical sciences, professional field 5.11. Biotechnology (technology of biologically active substances), announced in State Gazette issue 12/12.02.2021, as the only candidate involved is assist. prof. Andrey Marchev, PhD from the Laboratory "Metabolomics", Department of Biotechnology, IMicB-BAS. At the first meeting of the scientific jury, it was unanimously accepted that the candidate is admitted to the competition and the materials submitted by him meet the requirements of the Act for the Development of Academic Staff in the Republic of Bulgaria (RASRB), and specific rules of Bulgarian Academy of Sciences, and the Institute of Microbiology, BAS.

Assist. prof. Andrey Stoyanov Marchev obtained his master's degree from the University of Food Technology, Plovdiv, majoring in Biotechnology in 2006. Subsequently, he was enrolled as a doctoral student at IMicB-BAS, where in 2014 he obtained a PhD degree in "Biotechnology". He continued his scientific career as an assistant and chief assistant professor at IMicB-BAS and since 2017 he has held the position of "chief assistant professor" at the Center for Plant System Biology and Biotechnology, Plovdiv. In 2016 was nominated by the Ministry of Education and Science for the Grand Award for Young Scientist “Pythagoras”. In the period 2010 – 2017, he conducted a number of short-term specializations in Germany, Scotland and Luxembourg.

Assist prof. Marchev presented a list of publications for all his scientific production, which distinguishes between the publications presented in this competition and those used in previous procedures. In the competition, Andrey Marchev participates with 43 scientific papers, of which 10 publications equivalent to a habilitation thesis (indicator B) and 33 on indicator D. The scientific papers are divided into the following categories:

- 1 utility model;
- 4 monographs and book chapters;
- 27 publications referenced and indexed in world scientific databases, distributed as follows;
  - 23 with impact factor (Total impact factor over 83): Q1 - 13 pcs.; Q2 - 6 pcs .; Q3 - 3 pcs .; Q4 - 1 pc .;

- 2 pcs. with SJR, without IF;
- 2 pcs. without SJR and IF;
- 11 peer-reviewed publications in non-indexed journals or edited conference proceedings:

Also presented are:

- a list of participations in scientific forums, accompanied by evidence
- a list of participations in scientific projects, accompanied by evidence;
- a list of citations not presented in previous procedures (Indicator E);
- a reference for h-factor from Scopus

According to my personal impressions, assist prof. Andrey Marchev, PhD is a capable, serious, hard-working and very responsible scientist and a responsive colleague.

## **2. Evaluation of the research activity of the candidate.**

In the competition, assist prof. Andrey Marchev, PhD participates with 43 scientific papers, of which 10 publications equivalent to a habilitation thesis (indicator B) and 33 on indicator D. It makes a very good impression that 23 of these publications are in journals with impact factor, and 13 of which are in editions of category Q1. The total impact factor of the publications from the competition is over 83, which is an extremely good certificate for the candidate. The presented materials feature articles in *Trends in Food Science & Technology* (IF-11.08), *Critical Reviews in Biotechnology* (IF-8.11), *mSystems*, (IF - 6.28) and a number of other publications with an impact factor above 3. The high quality of the scientific production of the candidate is evidenced by the high citation rate of his articles, reflected by an h-index of 9. This is above the average value for associate professors in the country in this scientific field. From the presented materials, it is evident that the candidate has an affinity to applied science, which is evident from the applied utility model. Through the materials presented in the competition, the candidate meets the minimum requirements of the Act for the Development of Academic Staff in the Republic of Bulgaria in groups of indicators A, C and D and by 2190 points for indicator E (219 citations), he exceeds the minimum required points almost 44 times. Assist prof. Marchev has participated in 2 international and 10 national research projects, was a member of the organizing committee of three international scientific conferences and is a member of the Union of Scientists in Bulgaria and the Bulgarian Phytochemical Association.

The main scientific contributions of assist prof. Andrey Marchev, PhD involved in his active publishing activity can be attributed to plant biotechnology, chemistry of natural compounds (metabolomics and metabolic profiling based on nuclear magnetic resonance and high performance liquid chromatography) and pharmacology, as most publications are multidisciplinary.

Among the most important scientific and applied contributions of the candidate are:

- Initiation of plant *in vitro* systems, optimization of cultivation conditions and metabolic manipulation of secondary metabolism;
- Development of a metabolic platform based on nuclear magnetic resonance imaging and high performance liquid chromatography to study metabolic variations in medicinal plants and its application in the study of the authenticity and quality of commercial preparations of medicinal plants.
- Study of the anti-inflammatory, immunomodulatory and antiviral activity of plant extracts and pure molecules.

## **Conclusion**

The materials presented at the competition from assist prof. Andrey Marchev, PhD fully meet the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria, the corresponding rules for its implementation in Bulgarian Academy of Sciences and Institute of Microbiology, BAS. After getting acquainted with the quality of the candidate's scientific production, reflected mainly in specialized, prestigious scientific journals and the importance of his scientific and applied contributions, I give *convincingly my positive opinion*, and recommend to the other members of the scientific jury to prepare a report for the Scientific Council of IMicB-BAS for awarding the academic position “Associate professor” to assist. prof. Andrey Marchev, PhD, in the field of higher education 5. Technical sciences, professional field 5.11. Biotechnology.

13.06.2021

Prepared by:

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