

## OPINION

by **PhD Georgi Todorov Dobrev - Associate Professor at University of Food Technologies**  
of the materials submitted for participation in a competition for the academic position of  
**‘Associate Professor’ at the Institute of Organic Chemistry with Centre of**  
**Phytochemistry, BAS (IOCCP-BAS)**  
field of higher education 4. Natural sciences, mathematics and informatics,  
professional field 4.2. Chemical sciences,  
scientific specialty "Bioorganic chemistry, chemistry of natural and physiologically active  
substances"

In the competition for ‘associate professor’, announced in the State Gazette, issue 53 from 25.06.2021 and on the website of IOCCP-BAS, as a candidate participates **Chief Assistant Professor PhD. Manol Hristov Ognyanov** from LBAC-Plovdiv at IOCCP-BAS.

### 1. General presentation of the procedure and the candidate

The set of materials presented by Ch. Assistant Professor PhD. Manol Hristov Ognyanov on electronic media is in accordance with the Regulations on the terms and conditions for obtaining scientific degrees and for holding academic positions at IOCCP-BAS. and meets the criteria for holding the academic position of "Associate Professor". The candidate has submitted 20 scientific publications, participation in 41 scientific conferences and 27 research projects. I accept for review the attached 20 scientific publications, which are outside the PhD thesis and which are taken into account in the final evaluation.

The distribution of the scientific papers by quartiles is as follows: Q1 - 6 pcs., Q2 - 4 pcs., Q3 - 1 pcs., Q4 - 0 pcs., articles with SJR without IF - 9 pcs. The attached list of 109 citations in renowned journals, referenced in the world databases Web of Science and Scopus, gives an objective idea of the positive international evaluation of the results of the candidate's research work. A Hirsch index (H-index) of 7 was achieved, according to the Scopus database. The candidate has participated with 21 papers and 31 posters at 41 international and national scientific conferences. A high assessment of the quality of the research work of Ch. Assist. Prof. Ognyanov is the award of BAS received in 2019 "Prof. Marin Drinov" for young scientists up to the age of 35. It should be noted that Ch. Assist. Prof. Ognyanov published part of his research in reputed scientific journals such as Carbohydr. Polym., Int. J. Biol. Macromol. and Food Chem. The above materials allow the implementation of the national minimum requirements and the requirements of IOCCP-BAS for holding the academic position of "Associate Professor" in the professional field 4.2 Chemical Sciences. The achieved by Chief Assistant PhD Ognyanov scientometric indicators are presented in the following table:

<b>№</b>	<b>Group of indicators</b>	<b>Requirements of IOCCP-BAS for holding the academic position of "Associate Professor" in 4.2 Chemical Sciences</b>	<b>Achieved points by Ch. Assist.Prof. PhD Ognyanov</b>
1	A	50.00	50.00
2	B	-	-
3	C	100.00	105.00
4	D	220.00	230.00
5	E	70.00	218.00
6	F	-	-
7	G (H-index)	≥5	7

Ch. Assist. Prof. PhD Manol Ognyanov graduated with a Master's degree in Biotechnology in 2010. In the period 2011-2016 he was a PhD student at IOCCP-BAS, Sofia. In 2016 he successfully defended his dissertation on "Preparation and enzymatic modification of biologically active pectin polysaccharides" and he received PhD degree in the scientific specialty "Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Compounds". He started his career as an engineer-technologist at IOCCP-BAS in 2009. In the period 2010-2019 he held the positions of engineer-technologist and chemist-analyst at ITC-Innovative-Technological Center Ltd. Since 2014 he has been successively holding the academic positions of Assistant Professor and Chief Assistant Professor at IOCCP-BAS, Laboratory of Biologically Active Compounds - Plovdiv.

I have personal impressions of Ch. Assist. Prof. PhD Manol Ognyanov in his capacity as a part-time lecturer in Biochemistry at the University of Food Technologies. He shows precision and a high degree of responsibility in his work.

## **2. General characteristics of the candidate's activity**

The research activity of the candidate Ch. Assist. Prof. Manol Ognyanov, summarized in the presented 20 scientific publications, participation in scientific conferences and research projects and teaching activities fall in the field of bioorganic chemistry and chemistry of natural substances. The two main areas in which the candidate works are - (1) study of the composition, structure, functional and biological properties of polysaccharides and (2) study of the chemical composition and antioxidant activity of medicinal plants, berries and vegetables. An extended habilitation report is presented, according to the Regulations on the implementation of DASRBA. Publications 1, 2, 5-7 are equated to habilitation work (indicator "C").

Significant contributions in the first area from the research work of Chief Assist. Prof. Manol Ognyanov are:

1. The structure, functional and biological properties of polysaccharides of pectin type, isolated from various economically important plant species, medicinal plants and wastes from their processing were determined.

2. Immunomodulatory effect of isolated pectin polysaccharides from purslane and linden and lavender flowers has been established.



3. For the first time, a polysaccharide from a callus cell culture of fumaria (*Fumaria officinalis* L.) was isolated and its chemical structure and molecular weight were determined.

The contributions in the second area of the candidate's research work can be summarized to:

1. A method is proposed for the production of a plant cell wall preparation from rose hips, which is a source for the preparation of biologically active compounds.

2. The chemical composition of 23 samples of chokeberry fruit was determined and it was found that the pressing temperature of the juice and the nectar extraction had a significant effect on the composition of the polyphenolic components in the products obtained. The results can be used to obtain functional foods with different chemical composition, which is a prerequisite for different biological activity.

3. A scheme is proposed for the use of herbal extracts as co-pigments in order to stabilize chokeberry anthocyanins as a means of obtaining functional foods with improved sensory and functional properties.

4. A complex phytochemical evaluation of pepper (*Capsicum annuum* L.) has been performed, which can serve as a basis for the creation of new varieties and for the preservation of the genetic diversity of pepper on the Balkan Peninsula.

The candidate's research activity includes intensive project activity. Ch. Assist. Prof. Manol Ognyanov is a leader and member of the team in 27 research and educational projects, which is an objective assessment of the relevance and quality of his research and teaching activities.

The professional activity of Ch. Assist. Prof. Manol Ognyanov is also characterized by active teaching and learning activities - he is the head of 2 graduated students and 7 graduates of the University of Food Technologies.

In connection with the research work of Ch. Assist. Prof. Manol Ognyanov I have the following questions. Is it possible to use the results of the analysis of antioxidant activity of raw materials to obtain functional foods or food supplements? Is there a health claim approved by the European Food Safety Authority (EFSA) in relation to the consumption of plant polyphenols, which is related to the prevention of oxidative stress, and under what conditions is this health claim valid? In what direction should research be directed in order to have more approved health claims related to the consumption of foods or supplements rich in polyphenols?

## CONCLUSION

The documents and materials submitted by Ch. Assist. Prof. PhD Manol Hristov Ognyanov meet all the requirements of the Development of Academic Staff in the Republic of Bulgaria Act (DASRBA), the Regulations on the implementation of DASRBA, the Regulations on the implementation of DASRBA of BAS and the Regulations of IOCCP-BAS.

The candidate in the competition has submitted a sufficient number of scientific papers published after the materials used for achieving a PhD degree. In the scientific publications of the candidate there are original scientific and applied contributions, which have received international recognition.

The achieved by Ch. Assist. Prof. PhD Manol Ognyanov scientometric indicators fully comply with the specific requirements of the Regulations on the terms and conditions for obtaining scientific degrees and for holding academic positions in IOCCP-BAS.

After getting acquainted with the materials and scientific works presented in the competition, analysis of their significance and the scientific, scientific-applied and applied contributions contained in them, I find it reasonable to give my positive assessment and recommend to the Scientific Jury to prepare a report-proposal to the Scientific Council of IOCCP-BAS for election of Ch. Assist, Prof. PhD Manol Hristov Ognyanov for the academic position of 'Associate Professor' at IOCCP-BAS in professional field 4.2. Chemical sciences (Bioorganic chemistry, chemistry of natural and physiologically active substances).

18.10.2021 г.

Prepared the opinion:

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