

## STATEMENT

**About:** Competition for the academic position "Associate Professor" in "Pharmacognosy and Phytochemistry" in the field of higher education 7. Health care and sports, by professional field 7.3. Pharmacy and scientific specialty "Pharmacognosy and Phytochemistry" at the Department of "Pharmacognosy and Pharmaceutical Chemistry" of the Faculty of Pharmacy, MU-Plovdiv, announced in the "State Gazette", no. 59/11/07/2023

**Reviewer:** Associate prof. Kalin Valentinov Ivanov, PhD - Department of "Pharmacognosy and Pharmaceutical Chemistry", Faculty of Pharmacy, Medical University of Plovdiv.

I am appointed by the order of the Rector of the Medical University of Plovdiv No. R-3080/24.10.2023 as a member of the scientific jury in a competition for the academic position "Associate professor" in "Pharmacognosy and Phytochemistry" in the field of higher education 7. Health care and sports, by professional direction 7.3. Pharmacy for the for the teaching (in Bulgarian and in English) in the discipline "Pharmacognosy and Phytochemistry" announced in the "State Gazette", no. 59/11/07/2023.

Two candidates are admitted to participate in the competition: Chief assistant professor Diana Karcheva-Bahchevanska, PhD and chief assistant professor Paolina Kancheva Lukova - Katsarova, PhD, who work at the Department of "Pharmacognosy and Pharmaceutical Chemistry", Faculty of Pharmacy, Medical University of Plovdiv.

### **I. Analysis of the career profile of the candidates.**

**1. Chief assistant professor Diana Karcheva-Bahchevanska, PhD** graduated from secondary education in 2003 at "Sveti Kliment Ohridski" Secondary School, Plovdiv. In 2006, he graduated from the "Assistant Pharmacist" specialty at the Medical College of the Medical University of Plovdiv and obtained the "Professional Bachelor" degree. In 2012, she graduated Faculty of Pharmacy at the Medical University of Plovdiv and obtained the "Master's" degree in Pharmacy. In 2018, she successfully defended her PhD thesis in the doctoral program "Pharmacognosy and Phytochemistry" and in 2019 acquired the specialty "Medicinal Plants and Phytopharmaceutical Products". **Diana Karcheva-Bahchevanska** worked as an assistant professor from 2012 until 2018, since 2018 she works as a Chief assistant professor at the Department of "Pharmacognosy and Pharmaceutical Chemistry", Faculty of Pharmacy, Medical University of Plovdiv.

**2. Chief assistant professor Paolina Lukova - Katsarova, Ph** graduated "Ivan Vasov" high school in Plovdiv in 2006. In 2012, she graduated Faculty of Pharmacy at the Medical University of Plovdiv and obtained the "Master's" degree in Pharmacy. In 2018, she successfully defended her

PhD thesis in the doctoral program "Pharmacognosy and Phytochemistry". The candidate worked as an assistant professor from 2012 until 2018 and since 2018 she works as a Chief assistant professor at the Department of "Pharmacognosy and Pharmaceutical Chemistry", Faculty of Pharmacy, Medical University of Plovdiv.

## **II. General description of the materials submitted to the competition.**

The two participants in the competition are chief assistant professors at the Medical University of Plovdiv and hold a PhD degree and a specialty in the scientific field of Pharmacognosy and Phytochemistry. They have submitted all necessary documents for admission and participation in the competition: monograph, publications in refereed and indexed journals in Scopus and Web of Science, publications in non-refereed journals, citations, participation in national scientific and educational projects, etc. Contributions of a scientific and applied nature.

## **III. Evaluation of the candidates' scientific works for the academic development.**

### **1. General characteristics of the scientific production, publication activity and contributions of the candidates:**

**1.1. Chief assistant professor Diana Petrova Karcheva-Bakhchevanska, PhD** presents 20 publications in scientific journals, refereed and indexed in Scopus and/or Web of Science. The total number of points from the publications is 217.43. Of these publications, I consider that number 4 is not related to the field of the competition. Therefore, it should not be scored. After reducing the points by group  $\Gamma 7$ , the points total 205.43.

**Publication 4** Kozhuharov, V.R., Ivanov, K., Karcheva-Bahchevanska, D., Prissadova, N., Ivanova, S. Development and Validation of Gas Chromatography-Mass Spectrometry Method for Quantification of Sibutramine in Dietary Supplements. Processes 2023, 11, 2337.-12

The candidate also submits 10 publications in non-refereed peer-reviewed journals (Group  $\Gamma 8$ ) with a total of 121 points.

The total number of points from groups  $\Gamma 7$  and  $\Gamma 8$ , after reduction of 12 points from group  $\Gamma 7$ , I estimate at 326.43.

**As significant contributions of scientific and applied nature I consider:**

- One of the largest and most in-depth meta-analyses worldwide concerning studies related to the biological activity of adaptogens of plant origin.
- The study on the inhibitory effect of fruit extracts of the species *Vaccinium myrtillus* L., distributed in Bulgaria, on the key enzyme  $\alpha$ -amylase.
- The first histochemical study worldwide to describe the localization of essential oil (EO) from *Echinophora tenuifolia* subsp. *sibthorpiana*.
- The first histochemical and chemical analysis of essential oil from *Rhaponticum carthamoides* (Willd.) cultivated in Bulgaria.
- Studies on chemical composition, acute and subacute toxicity of essential oil of *Tanacetum vulgare* L. and *Tanacetum parthenium* L. from Bulgaria.

**1.2. Chief assistant professor Paolina Kancheva Lukova-Katsarova, PhD** presents 18 publications in scientific journals, refereed and indexed in Scopus and/or Web of Science. The total number of points from the publications is 187.09. Of these publications, I consider that the subject matter of numbers: 1, 2, 3 and 6, 7, 8 is not related to the field of the competition and have weight in another field (mainly "Pharmaceutical drug technology and biopharmaceutics"). For this reason, they should not be scored. After reducing the scores in group  $\Gamma 7$  by 90 points, the scores amount to 97.09.

The applicant submitted 13 publications in non-peer-reviewed journals (Group  $\Gamma 8$ ) with a total score of 138.5 points. Of these, publications numbered 2, 3 and 4 should not be scored because they are not in the scope of the competition. The subject matter of the publications is mainly in the field of pharmaceutical technology.

After reduction of the points, I estimate the total number of points in group  $\Gamma 8$  to be 91 points.

Chief assistant professor Paolina Kancheva Lukova-Katsarova has submitted 3 published chapters in collective monographs (4.25 points).

**As significant contributions of scientific and applied nature I consider:**

- Research on isolation and characterization of polysaccharides from marine algae and higher plants.
- Research on modification of polysaccharides and study of their biological activity.

## **2. Participation in national scientific and educational projects**

**2.1. Chief assistant professor Diana Petrova Karcheva-Bakhchevanska, Ph.D.** has participated in 12 projects (10 national scientific projects, 2 of which were funded by the The Bulgarian National Science Fund and 2 educational projects with European funding). She is the leader of 1 project.

**2.2. Chief assistant professor Paolina Kancheva Lukova-Katsarova, PhD** has participated in 7 (4 national scientific projects, 1 of which were funded by the The Bulgarian National Science Fund and 3 educational projects with European funding).

## **3. Scientific achievements**

Both candidates have serious scientific and creative achievements.

## **IV. Evaluation of monographic work.**

**1. The candidate chief assistant professor Diana Petrova Karcheva-Bakhchevanska, PhD** is an independent author of the monograph "HPTLC - application and possibilities in the analysis of substances of plant origin". I highly appreciate this monographic work and believe that it would be extremely useful not only for established researchers, but also for students and postgraduates dealing with the analysis of biologically active substances. The work meets the standards determined in the LDSARB.

**2. The candidate chief assistant professor Paolina Kancheva Lukova - Katsarova, PhD** presents in co-authorship with Plamen Katsarov a monographic work on the topic. Without diminishing the scientific value of the monograph, I rate higher the monographic work of chief assistant professor Diana Karcheva-Bakhchevanska, PhD for the following reasons:

"Polysaccharide microcarriers for drug delivery" is divided into two parts. The candidate is presented as the author of Part 2 in the book entitled "Polysaccharides for Microparticle Delivery" which starts on page 123. It is noteworthy that this part contains a considerable volume representing a translation of articles in which the applicant is a co-author with other researchers and has already submitted to the competition.

The monograph submitted by chief assistant professor Paolina Kancheva Lukova - Katsarova, PhD contains results, text, tables and figures that are included in already submitted publications for the competition.

### **Some examples of similarity are the following:**

**A.** There is a significant similarity with the following article that the candidate submitted for participation in the competition:

Kokova, V.; Lukova, P.; Baldzhieva, A.; Katsarov, P.; Delattre, C.; Molinié, R.; Petit, E.; Elboutachfai, R.; Murdjeva, M.; Apostolova, E. Extraction, Structural Characterization, and In Vivo Anti-Inflammatory Effect of Alginate from *Cystoseira crinita* (Desf.) Borry Harvested in the Bulgarian Black Sea. *Mar. Drugs* **2023**, *21*, 245. <https://doi.org/10.3390/md21040245>

N	Monography	Article	Notes
1.	Figure 62	Figure (page 13)	8 The figure is the same, but it is translated into Bulgarian in the monograph
2.	Figure 66 (page 222)	Figure (page 4)	1 The figure is identical. The text that applies to the figures is identical.
3.	Figure 70 (page 228)	Figure (page 6)	3 The figure is identical. The text that applies to the figures is identical.
4.	Figure 68 (page 225)	Figure (page 4)	2 Figure 68 of the monographic work is a part of figure 2 of the article. Both figures present the same results.
5.	Table 27 (page 226)	Table 2 (page 5)	Complete identity of the two tables. In the article the table is presented in English, in the monograph in Bulgarian. The text that refers to the tables is identical.

**B.** There is a significant similarity to the following article that the candidate submitted for participation in the competition:

Apostolova, E.; Lukova, P.; Baldzhieva, A.; Delattre, C.; Molinié, R.; Petit, E.; Elboutachfai, R.; Nikolova, M.; Iliev, I.; Murdjeva, M.; et al. Structural Characterization and In Vivo Anti-Inflammatory Activity of Fucoidan from *Cystoseira crinita* (Desf.) Borry. *Mar. Drugs* **2022**, *20*, 714. <https://doi.org/10.3390/md20110714>

N.	Monography	Article	Notes
1.	Figure 60 (page 215)	Figure 8 (page 13)	Complete identity of the figures and results.
2.	Figure 61 (page 216)	Figure 9 (page 14)	The figure is the same, but it is translated into Bulgarian in the monograph
3.	Figure 65 (page 221)	Figure 1 (page 3)	Complete identity of figures and results. Complete identity of the text that relates to the figures.
4.	Figure 67 (page 224)	Figure 2 (page 4)	Complete identity of the figures and results
5.	Table 28 (page 228)	Table 3 (page 5)	Complete identity of the figures and results

6.	Table 26 (page 220)	Table 2 (page 3)	Complete identity of the figures and results
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According to the Law on the Development of Academic Staff in the Republic of Bulgaria, "a monograph" is a published scientific publication containing a complete and comprehensive study of a particular subject, problem or person, written by one or several authors holding the same view. A monograph is a scholarly work that does not repeat or summarize existing knowledge, that has scholarly editors and/or peer reviewers, has an ISBN, and is at least 100 standard pages with 1800 characters per page."

According to Article 108, item 10 of the Regulations for the Development of the Academic Staff of MU-Plovdiv, the candidate shall submit **either a monographic work or 10 articles** that are different from the articles submitted in the competition.

In addition, a significant omission is the lack of a written separation protocol for the weight each of the two authors had in writing the monograph. This is necessary according to point 5 in the Notes to the Regulations for the Implementation of the LDSARB.

#### **V. Citation of the candidate's publications in national and foreign literature.**

**1. The candidate chief assistant professor Diana Petrova Karcheva-Bakhchevanska, PhD** provides a reference for: 92 citations in refereed and indexed in Scopus and Web of Science journals (92 x 15 points = 1380 points), 8 reviews of scientific articles in refereed scientific journals (8 x 15 = 120 points), 5 citations in monographs and collective volumes with scientific peer review (5x10 = 50 points) and 36 citations in non-refereed journals with scientific peer review (36 x 5 = 180 points). The citations of the candidate's publications exceed many times the requirements for the position of Associate Professor, set in the regulations of MU-Plovdiv.

**2. The candidate chief assistant professor Paolina Kancheva Lukova - Katsarova, PhD** provides a reference for: 238 citations and reviews, refereed and indexed in Scopus and Web of Science (238 x 15 points = 3570 points), 37 citations and reviews in non-refereed journals with scientific peer review (37 x 5 = 185 points), 3 citations in monographs and collective volumes with scientific peer review (3 x 10 = 30 points). One of the publications has been cited more than 100 times, in refereed and indexed Scopus and Web of Science journals. This publication accounts for 1515 points in group Д10. The citations of the candidate's publications exceed many times the requirements for the position of Associate Professor, set out in the regulations of MU-Plovdiv.

#### **VI. Complex, qualitative evaluation of the teaching and learning activities, including scientific guidance of students, PhD students, postgraduate students.**

**1. Candidate chief assistant professor Diana Petrova Karcheva-Bakhchevanska, Ph.D.** actively teaches Pharmacognosy and Phytochemistry, for the last 3 academic years, having a

teaching load that exceeds the normative teaching load many times. She was also the supervisor of one trainee, Mathias Bon from Polytech Clermont.

**2. Candidate chief assistant professor Paolina Kancheva Lukova - Katsarova, PhD** has no teaching load for the last three academic years.

Both participants in the competition have 5 years of experience as a chief assistant professor, i.e. on this indicator they receive 500 points each. For indicator G, the candidate chief assistant professor Diana Petrova Karcheva-Bakhchevanska, PhD receives respectively a total of 1685 points (teaching load + academic position), and the candidate chief assistant professor Paolina Kancheva Lukova-Katsarova, PhD 500 points (teaching load + academic position).

## VII. Overall evaluation

I present the overall assessment of both candidates in a table.

### 1.Chief assistant professor Diana Petrova Karcheva-Bakhchevanska, PhD:

GROUP	INDICATORS	REQUIREMENTS OF MUPLOVDIV - ASSOCIATE PROFESSOR (POINTS)	POINTS FOR THE CANDIDATE (POINTS)
A	1	50	50
Б	2	-	-
B	3-4	100	100
Г	5-9	210	326.43
Д	10-12	300	1730
Е	13-22	50	278.34
Ж	Teaching load (lectures and practicles):	360	1069
	Academic position:	200	500
	<b>TOTAL:</b>	<b>1270</b>	<b>4053.77</b>

## 2. Chief assistant professor Paolina Kancheva Lukova-Katsarova, PhD

GROUP	INDICATORS	REQUIREMENTS OF MUPLOVDIV - ASSOCIATE PROFESSOR (POINTS)	POINTS FOR THE CANDIDATE (POINTS)
A	1	50	50
Б	2	-	-
B	3-4	100	100
Г	5-9	210	192.34
Д	10-12	300	3785
E	13-22	50	145
Ж	Teaching load (lectures and practicles):	360	-
	Academic position:	200	500
	<b>TOTAL:</b>	<b>1270</b>	<b>4772.34</b>

Both candidates have exceeded multiple times the points required by the regulations of MUPlovdiv for the position of Associate Professor. Chief assistant professor Diana Karcheva-Bakhchevanska, PhD participated in the current competition with more points in groups Г, E and Ж, while chief assistant professor Paolina Lukova-Katsarova, PhD participated with more points in group Д.

### VIII. Conclusion

The submitted documents and materials of both candidates meet the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDSARB), the Regulations for the Implementation of the LDSARB and fully meet the requirements of MU - Plovdiv for acquiring of the academic position "Associate Professor".

After a detailed investigation of the submitted documents, it is established that chief assistant professor Diana Karcheva-Bakhchevanska, PhD participated in the current competition with more points in groups D, F and G, while chief assistant professor Paolina Lukova-Katsarova, PhD participated with more points only in group E. The advantage in the number of citations (group E) of chief assistant professor Paolina Lukova-Katsarova is the result of a review article that has been




cited more than 100 times (1515 points are due to the article in question). It is important to note that chief assistant professor Diana Karcheva-Bakhchevanska, Ph.D. has also had a serious teaching load for the last 2 academic years, while Asst. Paolina Lukova-Katsarova has no teaching load for the last two academic years. According to the the above, I propose to the honorable members of the scientific jury to award chief assistant professor Diana Karcheva-Bakhchevanska, PhD the academic position of "Associate Professor" in the field of higher education 7. Health care and sports, by professional field 7.3. Pharmacy and scientific specialty "Pharmacognosy and Phytochemistry".

#### **IX. Proposed ranking of the candidates**

1. Chief assistant professor Diana Karcheva-Bakhchevanska, PhD
2. Chief assistant professor Paolina Lukova-Katsarova, PhD

Plovdiv  
20.12.2023

Prepared by:   
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