

REPORT

to occupy the academic position:

"Professor"	
"Associate Professor"	X
	one of the academic positions indicated shall be marked with the sign "X"

Candidates to occupy the position:

1	Chief Assistant	PhD	Stanislava	Plamenova	Vladimirova	UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

5	Technical sciences
code	name

Professional area:

5.10	Chemical technologies
code	name

Scientific specialty:

Technology of fine organic and biochemical synthesis
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The competition has been announced:

67	13.08.2021	Organic synthesis and fuels	Chemical technologies
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

professor	DSci	Alexander	Borisov	Zlatkov	MU-Sofia, Faculty of Pharmacy
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Chief Assistant	PhD	Stanislava	Plamenova	Vladimirova
academic position	scientific degree	name	middle name	last name

1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	X
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the answers given is marked with the sign "X"

It must be filled in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.

Ch. Assistant Professor Vladimirova participated in the competition for the position of associate professor with a total of 25 scientific articles, which were accepted in accordance with the theme of the competition. Of these, 18 have been published in journals, referenced and indexed in global databases (Web of Science and Scopus), as follows:

Indicator B4, Habilitation work in the form of not less than 10 publications in journals, referenced and indexed in the world database (Web of Science and Scopus) is completed with 117.00 points (10 publications), with a required minimum of 100 points .

By indicator G7 (publications in journals referred to in Web of Science and Scopus) and indicator G8 (publications in non-refereed journals) there are publications corresponding to the respective 176.66 points (8 publications) and 30.75 points (7 publications) or a total of 207.41 points, with a minimum requirement of 200 points.

By the group of indicators D12-D15, Ch. Assistant Professor Vladimirova cited only citations from journals that are referenced and indexed in the global database Web of Science and Scopus (indicator D12). Indicator D12 lists 20 citations or 200 points, which significantly exceeds the requirements of at least 50 points.

According to indicators E, no points are required for holding the academic position of "Associate Professor", but Ch. Assistant Vladimirova has an asset in these indicators, which should appear group:

- Indicator E18 - participation in 1 project funded by NSF (10 points);
- Indicator E24 - author of university training - Design of biologically active substances ", UCTM, 2021, ISBN: 978-954-465-118-3, e-ISBN: 978-954-465-119-0 (20 points) ;

1.2. Relevance of scientific and / or applied research:

A) The research is relevant. Part of the research is pioneering (no results are known on the topic by other authors)	8 points	
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	X
C) Most of the research is relevant, but also some results are presented that have no scientific and / or applied value	4 points	
D) The smaller part of the research is relevant	2 points	
E) Research is not relevant	0 points	
		one of the answers given is marked with the sign "X"

The evaluation of the relevance of the research must be substantiated.

The research in the works of the candidate, presented for the acquisition of the academic position "Associate Professor" are entirely in the field of scientific specialty for which the competition was announced and relate mainly to the synthesis, structural characterization and study of biological activity of a large number of new molecules containing a pyrrole heterocycle.

Good scientific results have been obtained in an experimental study of the potential of the synthesized compounds as possible anti-inflammatory and analgesic agents. A number of newly synthesized N-pyrrolylcarboxyl hydrazides and hydrazones have been tested against a strain of *Mycobacterium tuberculosis* H37Rv and show promoting anti-tuberculosis activity. Antioxidant activity in terms of radical scavenging ability (DPPH test) and reducing ability (ABTS), antibacterial activity against Gram-positive (*Bacillus cereus* 1085), Gram-negative (*Pseudomonas fluorescens*) microorganisms and fungi (*Candida lipol*) as well as herbicidal activity of some of the synthesized new compounds were also studied.

A relationship has been established between the structure and the biological activity of the studied compounds, which is an excellent prospect for the design of new derivatives with improved pharmacological properties at lower toxicity.

Undoubtedly, the research is up-to-date, and the obtained results can be related to the enrichment of the scientific field with new knowledge. Approaches to optimize the production of different classes of heterocyclic analogs also represent a topical contribution to organic synthesis.

1.3. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	X
B) Realistic, but not of scientific and / or applied interest	4 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given is marked with the sign "X"

Objectives must be specified. The type of the set objectives must be justified
<p>The set goals according to the nature of the conducted research are realistic, and the results achieved on the basis of them are distinguished by significant scientific and applied interest.</p> <p>An essential element of the studies performed on the newly synthesized pyrrole analogs are the pharmacological tests performed for the above-mentioned activities, including initial screening for in vitro cytotoxicity (on HepG2 cells) and chemocompatibility (haemolysis assay).</p>

1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	X
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	
E) Lack of contributions	0 points	
		one of the answers given is marked with the sign "X"

Contributions must be specified. The type of results achieved must be justified.
<p>The candidate's contributions can be summarized in the following three areas:</p> <ul style="list-style-type: none"> ➤ Synthesis, structural characterization and biological activity of new N-pyrrolylcarboxylic acids. ➤ Synthesis, structural characterization and biological activity of new N-pyrrolylcarboxyl hydrazides and hydrazones. ➤ Synthesis, structural characterization and biological activity of new

molecules containing pyrrole heterocycle.

They represent a significant scientific and applied interest, significantly enrich the achievements in the scientific field with new knowledge. The relationship between structure and pharmacological activity established by pharmacological studies can be considered as a basis for the development of the field with a view to future design of new analogues with optimized pharmacokinetic and pharmacodynamic properties with improved pharmacological properties and lower toxicity.

1.5. Participation of the candidate in the achievement of the presented results:

A) The candidate has at least an equal participation in the submitted papers	8 points	X
B) The candidate has at least an equal participation in most of the submitted papers	7 points	
C) The candidate has a secondary participation in most of the submitted papers	4 points	
D) The candidate participation is unnoticeable	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items C or D is marked.

Ch. assistant Vladimirova is a qualified young scientist and it is evident from the presented publications that she has a real role in setting the scientific task, conducting the research and discussing the data that were used in the submitted papers.

1.6 Pedagogical activity:

A) The candidate has effective and sufficient pedagogical activity at the university. The textbooks issued are modern and useful (they meet the requirements of the Regulations). The work with undergraduate and doctoral students is at a high professional level.	8 points	X
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	
C) The pedagogical activity and / or textbooks issued are insufficient (do not meet the requirements of the Regulations)	0 points	
		one of the answers given

		is marked with the sign "X"
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Critical notes must be provided if one of the items B or C is marked.

1.7. Critical notes:

A) Lack of critical notes	8 points	X
B) Critical notes of a technical nature	7 points	
C) Critical notes that would partially improve the results achieved in a small part of the research	5 points	
D) Critical notes that would partially improve the results achieved in most of the research	3 points	
E) Significant critical notes	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the answers C, D or E is marked.

1.8. Conclusion

A) The evaluation of the candidate's activity is POSITIVE	This evaluation is assigned to a total number of at least 50 points	X (78 points)
B) The evaluation of the candidate's activity is NEGATIVE	This evaluation is assigned to a total number below 50 points	
		one of the answers given is marked with the sign "X"

To be filled in if requested by the member of the scientific jury
<p>In addition to all the above, it is necessary to note other assets of the candidate for the academic position of "Associate Professor", which do not carry additional points, but are an integral part of the academic activities of Ch. Assistant Professor Stanislava Vladimirova:</p> <p>1) Development of curricula and conducting 7 lecture courses in the specialty "Fine Organic Synthesis" - 4 in the Bachelor's degree and 3 in the Master's degree as well as 2 lecture courses have been developed in the specialization in "Perfumery and cosmetics" at DPDO of UCTM.</p> <p>2) Management of 70 successfully graduated with diploma theses students for Bachelor's and Master's degrees.</p> <p>3) Participation with reports and posters in a total of 27 international and national scientific forums.</p> <p>4) Development of 20 research projects under the target subsidy for research at UCTM, as well as participation in similar projects of other universities - 3 of MU-Sofia and 1 of MU-Plovdiv.</p> <p>Based on mentioned above in my report about the assets in the teaching and research work of the candidate in the competition for the academic position of "Associate Professor" in the specialty Technology of fine organic and biochemical synthesis, I believe that Ch. Assistant Professor Stanislava Vladimirova is a well-established lecturer and scientist, possessing the necessary qualities to hold this academic position and fully satisfies the quantitative criteria formulated in the national and institutional regulations for this purpose. Her qualification, teaching experience and the achieved scientific results allow me to give a positive assessment and convincingly recommend to the respected members of the scientific jury to vote for the award of the academic position "Associate Professor" to Ch. Assistant Professor Dr. Stanislava Plamenova Vladimirova, PhD.</p>

15.11.2021	The report was written by:	
date		signature