Appendix 12d

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	**Assist. Prof.**	**Dr.**	**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

The competition has been announced:

67	**13.08.2021**	**Organic Synthesis and fuel**	**FCT**
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Prof.	**Dr.**	**Ivanka**	**Georgieva**	**Stankova**	**South-West University ‘‘Neofit Rilski’’**
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Assist. Prof.	Dr.	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.

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	**x**
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	
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 scientific researches of Assist. Prof. Dr Stanislava Plamenova Vladimirova are associated with chemical modifications of the pyrrole heterocycle, including the synthesis of new *N*-pyrrolylcarboxylic acids, *N*-pyrrolylcarboxylic hydrazides and hydrazones, as well as pyrrole analogues of opioid peptides e.g.Tyr-MIF-1. Once the new compounds have been isolated and characterized they have been studied mainly for anti-inflammatory, analgesic and antibacterial activities. The effective "green" synthesis carried out for some of the compounds further confirms the the relevance of the research theme.

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
Objectives of the research are realistic and for their accomplishment the following methods have been selected: ➢ a synthesis of newly pyrrole derivatives; ➢ isolation and chemical characterization; ➢ study of biological activity; ➢ analysis and derivation of structure-activity relationships of biologically active molecules.

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.
The main scientific contributions are related to: ***Strand 1:*** ➢ Synthesis, structural characterization and biological activity of new N-pyrrolylcarboxylic acids,containing amino acid moiety as potential anti-inflammatory, analgesic and antibacterial agents. ➢ Synthesis, structural characterization and investigation of herbicidal activities of a series of new *N*-pyrrolylcarboxylic acids based on γ-aminobutyric acid.

- The developed UHPLC method has been applied for stability testing of pyrrole derivatives containing ester groups under acidic (pH 1.2 and pH 4.5), normal (pH 6.8) and alkaline (pH 13) conditions at a temperature of 37 °C.

Strand 2:

- Synthesis, structural characterization and biological activity of new *N*-pyrrolylcarboxylic hydrazides and hydrazones containing a leucine/a phenylalanine residue. The new compounds were subjected to evaluation of their antioxidant activity in terms of DPPH•-scavenging ability and reducing power (ABTS).
  The initial *in vitro* screening for cytotoxicity (on HepG2 cells) and hemocompatibility (hemolysis assay) of selected compounds has been provided.
- A series of new synthetical hydrazones has been screened against Mycobacterium tuberculosis strain H37Rv (ATCC 27294).

Strand 3:

- Synthesis, structural characterization and analgesic activity were studied for new hybrids, containing pyrrole heterocycle and Tyr-MIF-1 peptide analogues.
- A new series of pyrrole-containing compounds was designed, following the architecture of established tuberculostatics.
- By "one-pot" ternary synthesis was provided an efficient "green" synthesis of novel 2-hydroxynaphthylpyrroles.
  The obtained results are with important scientific contributions and with an impact on their further application in the field of medicine and agriculture.

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.

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"

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**

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
In conclusion, I believe that the scientific results, reflected on 25 publications, from them: 18 publications are in journals refereed in the World database "Web of Science" and "Scopus"; 7 articles are in non-refereed journals with scientific peer review or in edited collective conference volumes, and presented a training appliance as well, conducted lecture courses, meet the requirements of the Internal Rules for the development of the academic staff of UCTM to obtain scientific degrees and titles. Based on the above, and based primarily on the contributions and the results obtained, I propose to the esteemed Scientific Jury and the Scientific Council at University of Chemical Technology and Metallurgy to award the scientific title "Associate Professor" to Assist. Prof. Dr. Stanislava Plamenova Vladimirova in scientific specialty 5.10 - Chemical Technologies (Technology of Fine Organic and Biochemical Synthesis).

29.11.2021	The report was written by:	
date	**Prof. Dr. Ivanka Stankova**	signature