**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. | PhD | Stoyko | Aleksandrov | Petrin | UCTM |
| № | academic position | scientific degree | name | middle name | last name | workplace |

**Scientific area**:

| | |
|---|---|
| 5. | Technical sciences |
| code | name |

**Professional area**:

| | |
|---|---|
| 5.11 | Biotechnology |
| code | name |

**Scientific specialty**:

| |
|---|
| Technology of bioactive substances |

**The competition has been announced:**

| | | | |
|---|---|---|---|
| 71 | 07.08.2026 | Biotechnology | FHSI |
| in SG issue | date | for the needs of the Department | Faculty |

**The report was written by**:

| | | | | | |
|---|---|---|---|---|---|
| Assoc. Prof. | PhD | Tsvetelina | Georgieva | Foteva | UCTM |
| academic position | scientific degree | name | middle name | last name | workplace |

**1. Report for the candidate:**

| Assist. Prof. | PhD | Stoyko | Aleksandrov | Petrin |
|---|---|---|---|---|
| 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" |

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|---|
| 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" |

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|---|
| The evaluation of the relevance of the research must be substantiated. |
| The presented scientific research is highly relevant, as it is directly aligned with contemporary global priorities for the transition towards a circular economy, green technologies, and sustainable biomedicine. Through fundamental kinetic and physicochemical models, effective bioconversion of waste biomass into biofuels and value-added cellulosic materials has been achieved. At the same time, innovative eco-friendly composites (MDF/HDF) with reduced formaldehyde emissions have been developed, alongside novel biologically active peptide analogues with high potential for |

| |
|---|
| pharmaceuticals. The high scientific and applied prestige of the achieved results is confirmed by their publication and citation in reputable international journals. |

**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 |
|---|
| The main goal of the research is the development of integrated, eco-friendly technologies for the comprehensive utilization of lignocellulosic biomass and waste raw materials into biofuels, high-value cellulose derivatives (MCC/MFC), and novel eco-composite boards (MDF/HDF). Through in-depth kinetic, physicochemical, and spectroscopic studies, the aim is to optimize the processes of pretreatment, enzymatic hydrolysis, and chemical modification for industrial application. In parallel, the objective includes the design, structural characterization, and testing of novel biologically active compounds and peptide analogues with potential for modern pharmacy and biomedicine. |

**1.4. Candidate research contributions:**

| | | |
|---|---|---|
| A) With lasting scientific and / or applied response, they form the basis for new research and applications | 20 points | |
| B) They are of significant scientific and / or applied interest, complete and / or summarize previous research | 16 points | X |
| 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. |
|---|
| Based on the contributions:<br>1. Physicochemical and kinetic patterns of enzymatic hydrolysis of various types of lignocellulosic biomass. |

2. Pretreatment and bioconversion of lignocellulosic biomass into fermentable sugars.
3. Acid hydrolysis and cellulose modification for the production of value-added products.
4. Production of medium-density and high-density fiberboards (MDF and HDF) by the dry method, recycling and utilization of secondary fibrous raw materials, and the use of additives to improve panel properties.
5. Preparation, modification, and characterization of natural and synthetic biologically active compounds.
6. Spectroscopic approaches for monitoring and characterizing chemical transformations and technological studies in chemical pulp production.

The results can be classified as scientific-theoretical (fundamental) – 1, scientific-applied – 2, 5, 6, and applied (technological) – 3, 4.

**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 | |
| B) Critical notes of a technical nature | 7 points | X |
| 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 |
|---|
| |

| **10.12.2026** | The report was written by: | |
|---|---|---|
| date | **Assoc. Prof. Tsvetelina Foteva, PhD** | signature |