

Assistant Professor in the group of research and teaching staff at the Institute of Molecular and Industrial Biotechnology

Lodz University of Technology is one of the finest universities of technology in Poland. Its tradition and experience in training professionals and conducting research date back more than 75 years. It is an attractive partner for business. It cooperates with the largest national and international corporations. It conducts research of a European standard, develops new technologies and creates innovation in collaboration with the leading research centres all over the world. One of the pillars of Lodz University of Technology management is equal treatment of staff regardless of their gender, age, race or other demographic and social characteristics. In 2016, TUL was the first technical university in Poland to receive the HR EXCELLENCE IN RESEARCH award certifying that the University adheres to the principles of *the European Charter for Researchers* and *the Code of Conduct for the Recruitment of Researchers*.

1. The requirements to be met by the candidate (detailed description of the knowledge, qualifications, skills, and professional experience):
 - Doctor of Philosophy degree in biotechnology, nutrition and food technology, chemical sciences or a related field;
 - Documented academic achievements in a form of at least five publications in international scientific journals (from the Web of Science database) or books with world-wide coverage;
 - Documented participation in the development of inventions - co-author of at least four patents;
 - Participation in at least one research project funded by the Polish National Science Center or the National Centre for Research and Development;
 - Experience in the cultivation of microorganisms, taking into account surface and submerged methods as well as soil bioreactors;
 - Practical knowledge of the operation of fermentors, including on a quarter-technical scale, for culturing microorganisms in submerged and solid state fermentation conditions;
 - Experience in optimization and scale up of biotechnological processes;
 - Practical knowledge of the techniques of high-performance liquid chromatography HPLC and gas chromatography GC;
 - Experience in cooperation with the industrial sector (establishing contacts, negotiating, formalising the cooperation);
 - Knowledge of standard statistical analyzes used in interpreting biological results;
 - Confirmed knowledge of the English language at a level of at least B2;
 - Ability to independently plan and conduct experiments and analyze the results;
 - Experience in conducting didactic classes with students;
 - Knowledge of the Polish language, fluent in speech and writing, allowing for teaching with students.

2. Specification of the terms and conditions of employment:
 - Employment contract (full-time) since 01.10.2022

3. Description of the expected responsibilities and duties:

- Conducting scientific research in the disciplines of nutrition and food technology, chemical engineering, or related disciplines;
- Didactic teaching for the Bachelor's and Master's degree courses related to the disciplines of nutrition and food technology as well as chemical engineering;
- Participation in scientific projects implemented at the Institute and applying for grants financed by external institutions;
- Participation in organisational activities at the Institute.

4. List of required documents:

- 1) application for employment to the Rector of Lodz University of Technology;
- 2) personal questionnaire for a person applying for employment at Lodz University of Technology, as provided in Annex no. 1.1 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 3) Data Privacy Statement as provided in Annex no. 1.2 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 4) Consent to the processing of personal data, as provided in Annex no. 1.3 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 5) true copies/copies of diplomas;
- 6) description of scientific achievements and research experience; 7) other documents proving the qualifications.

5. The place, manner, and deadline for submitting the documents (as well as information concerning their return):

Competition entries should be submitted by 21.07.2022 (15:00 Europe/Brussels) at the Secretariat of the Institute of Molecular and Industrial Biotechnology at the Lodz University of Technology, 2/22 Stefanowskiego Street, 90-537 Łódź, Poland, (building no. A-2, 3rd floor, room no. 318) or send to the e-mail address: ewa.gromek@p.lodz.pl with "job application - I51 assistant professor competition" in the subject line.

Competition entries can also be sent by post to the correspondence address: Lodz University of Technology, Institute of Molecular and Industrial Biotechnology, 116 Żeromskiego Street, 90-924 Łódź, Poland in an envelope with the note "job application".

Documents delivered after the deadline (the date of delivery to the Institute of Molecular and Industrial Biotechnology TUL) will not be considered.

The Lodz University of Technology reserves the right to cancel the competition without giving reasons.

The condition for the validity of the competition is the approval of the Rector of the Lodz University of Technology.

The adjudication of the competition is not tantamount to establishing employment at the Lodz University of Technology, the final decision on establishing the employment is made by the Rector of the University.

After the end of the competition procedure, the remaining candidates may collect the submitted documents within 30 days.

6. Contact person and postal and e-mail addresses to which documents or scans thereof may be forwarded:

In matters related to the competition, please contact Mrs. Ewa Gromek,
e-mail: ewa.gromek@p.lodz.pl

7. The expected date of the announcement of the decision:

July 2022

8. Description of the Institute's profile and the leading research conducted in the Institute:

The Institute of Molecular and Industrial Biotechnology was established in 1963. Based on the laboratories of X-ray Structural Analysis, Molecular Biotechnology and Cell Culture, it conducts research in the field of industrial biotechnology, molecular biotechnology, biomaterials engineering, proteomics/structural biology, food biochemistry and nutrigenomics. Current research topics include:

1. mathematical optimization of microorganism culture conditions in bioreactors (submerged and fixed bed cultures),
2. development of biotechnologically useful preparations,
3. development of efficient biotransformation processes carried out in unconventional media: micro-water, two-phase, gaseous environments, ionic liquids, etc.,
4. scale-up of biotechnological processes,
5. molecular identification of microorganisms producing enzymes and valuable bioproducts,
6. construction of recombinant enzymes using genetic engineering techniques: selection of vectors and expression systems; optimization of expression of target gene(s) in a heterologous host, purification of recombinant enzymes,
7. structural studies of biologically active compounds in the aspect of application in medicine and biotechnology,
8. characterization of pro-health effects of phytochemicals and synthetic compounds using *in vitro* methods,
9. search of antidiabetic compounds,
10. determination of cytotoxicity, efficacy and molecular mechanisms of xenobiotics using cancer cell lines,
11. tests of biocompatibility and cytotoxicity of materials using *in vitro* methods,
12. crystallographic studies of native proteins and their complexes with ligands.