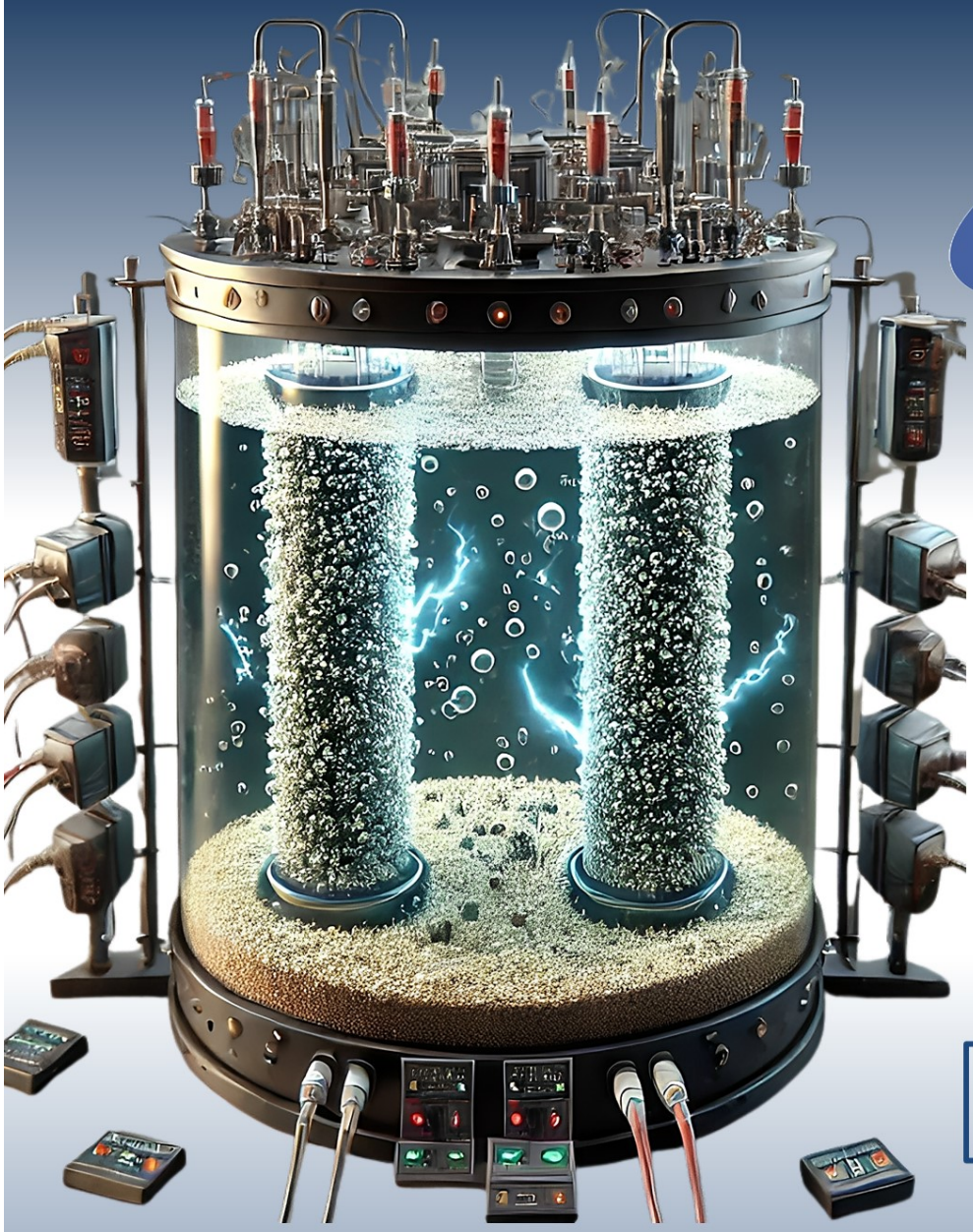
Fully Funded PhD Position at MSCA Doctoral Network

Biotechnology and Bioelectrochemical Systems



A unique opportunity to be part of a research network funded by the Marie Sklodowska-Curie Actions (MSCA) under the European Union's Horizon Europe program

Application Period:
02 April – 23 May 2025

International Training & Mobility: The PhD candidates will have opportunities for secondments at partner institutions within the MSCA DN network

Applicants can apply to METU environmental engineering department or biotechnology interdisciplinary program
For admission requirements, please check related programs' websites

ODTÜ METU

For further information please contact
Assoc. Prof. Dr. Yasemin Dilşad Yılmazel, PI
dilsad@metu.edu.tr

PhD Recruitment – Middle East Technical University (METU) Bioprocess Engineering Research Group (BioERG)

2 PhD Positions at the Middle East Technical University (METU) within Marie Skłodowska-Curie Actions Doctoral Network (MSCA DN) Project

LeAD: Leveraging Anaerobic Digestion through environmental stresses

Bioprocess Engineering Research Group (BioERG) at the Middle East Technical University (METU) is offering **fully funded PhD positions** as part of the **MSCA Doctoral Network (MSCA DN)**. The selected candidates will work on cutting-edge research in anaerobic biotechnology and bioelectrochemical systems, focusing on the role of **electroactive microorganisms (EAMs)** and **conductive material amendments** in anaerobic digestion systems.

These PhD positions provide a unique opportunity to work within an international, interdisciplinary research network funded by the **Marie Skłodowska-Curie Actions (MSCA)** under the European Union's Horizon Europe program. The candidates will benefit from excellent research facilities, international collaborations, and specialized training in environmental biotechnology.

BioERG is led by Assoc. Prof. Yasemin Dilsad Yilmazel. You can direct her questions about the position to dilsad@metu.edu.tr. Further information about the research group can be found at:

www.yasemindilsad.com
https://avesis.metu.edu.tr/dilsad
https://orcid.org/0000-0001-9223-9681

Project 1: Role of Electroactive Microorganisms (EAMs) on the Performance of Anaerobic Digestion

This project aims to:

- Determine the impacts of bioaugmentation of EAMs on the performance of the anaerobic digestion process during stressed conditions.

The selected PhD candidate will conduct experimental and analytical studies to investigate the mechanisms and practical applications of EAMs in anaerobic digestion.

Project 2: Leveraging Anaerobic Digestion (AD) through Amendment of Conductive Materials (CMs) into Microbial Electrolysis Cell (MEC) Integrated AD Systems

This project aims to:

- Enrich diverse types of syntrophic and methanogenic EAMs via the amendment of carbon-based CMs into MEC/AD systems and investigate the use of CM amendment as a strategy to enhance the stability of MEC/AD systems under stressed conditions.

The selected PhD candidate will work on developing innovative approaches to improve anaerobic digestion efficiency through electroactive microbial communities and conductive material amendments.
The PhD candidate(s) will actively contribute to experimental and analytical studies related to project objectives.

Eligibility Requirements

**The applicants can select one of the two programs for PhD 1) Environmental Engineering (ENVE) or Biotechnology (Biotech)*

1. Mobility Rule (MSCA DN):

- Applicants must not have resided or carried out their main activity (work, studies, etc.) in Turkey for more than 12 months in the 36 months immediately before their date of recruitment.
- *Date of Recruitment:* The first day of employment under the action (as indicated in the employment contract).
- *Refugee Exception:* For refugees under the Geneva Convention (1951 Refugee Convention and the 1967 Protocol), the period before refugee status is conferred will not count as residence/activity in Turkey.

2. Academic Requirements:

- A Bachelor's degree (and possibly a Master's degree) in Environmental Engineering, Environmental Microbiology, Chemical Engineering, Microbiology, or a related area.
- As per EU doctoral network funding rules, applicants **must not** hold a PhD at the time of application.

3. Required Competencies:

- Strong interest in the research topic.
- Solid background in anaerobic biotechnology, process engineering, or environmental biotechnology.
- Strong writing and communication skills.
- Ability to work independently and in an international team.
- Capacity and willingness to assist in project-related organizational tasks.

4. English Language Proficiency (Mandatory):

Applicants must demonstrate English proficiency through one of the following:

Exam	Minimum Score	Additional Notes
PTE Academic	73 (65*)	*Valid for exams taken before 12.11.2024.*
TOEFL iBT	79	-
METU English Proficiency Exam (EPE)	65	**Exam Date:** 06 May 2025. Applications open **14-25 April 2025** (deadline: 25 April 2025, 17:00). The exam will be held face-to-face. More information: https://epe.metu.edu.tr

5. Cumulative grade point average (CGPA) requirement:

For ENVE applications:

Degree	BSc CGPA
PhD on MSc	2.30 (out of 4.00)
PhD on BS	3.25 (out of 4.00)

For Biotechnology applications:

Degree	BSc CGPA	MSc CGPA
PhD on MSc	2.50 (out of 4.00)	3.00 (out of 4.00)

6. Standardized Test Requirements:

Applicants must provide a valid **ALES (Academic Personnel and Graduate Education Entrance Exam of Turkiye)** or **GRE (Graduate Record Examinations)** score:

Test	Minimum Score (MSc holders)	Minimum Score (BSc holders)	Additional Notes
GRE (Quantitative)	155	156	*Scores listed are valid for Environmental Engineering. For Biotechnology, 153 is the minimum.*
ALES (Quantitative)	75	80	*Scores listed are valid for Environmental Engineering. For Biotechnology, 70 is the minimum.*

6. Additional Experience (Advantageous, but not mandatory):

- Research and/or professional experience with interdisciplinary collaboration.
- Experience with bioelectrochemical systems, strictly anaerobic microbial cultivation, molecular biology tools (e.g., qPCR).
- Publications in peer-reviewed international journal articles.

Application Process

Applications must be submitted to the **METU Graduate School of Natural and Applied Sciences** via the online portal:

🔗 METU Graduate Application Portal https://application.metu.edu.tr

📅 **Application Period:** 02 April – 23 May 2025

Applicants can apply to:

- **Environmental Engineering Department** (Admission Info: https://enve.metu.edu.tr/en/enve-admission
- **Biotechnology Interdisciplinary Program** (Program Info: https://fbe.metu.edu.tr/en/biotechnology
- **Biotechnology Interdisciplinary Program** (Admission Criteria: http://btec.metu.edu.tr/criteria-phd)

Required Documents

Applicants must submit the following documents:

1. **Degree Certificates:**
    - Certified copies of **Bachelor's** and (if applicable) **Master's** degrees.
    - Official translations into English (if the originals are in another language).

   - *A Master's degree is not required at the time of application but must be obtained by September 2025 (date of recruitment)*
2. **Curriculum Vitae (CV).**
3. **List of Publications (if any):**
   - Include a description of the applicant's contribution.
4. **References:**
   - Letters or contact details of **at least two referees** (to be included in the CV).
5. **Motivation Letter (Max 1 Page):**
   - Introduction and qualifications.
   - Summary of previous research experience and key results.
   - Future professional goals.
6. **Proof of Residence:**
   - A statement and supporting documents proving residence(s) over the last 4 years.

Scholarship & Benefits

Successful candidates will receive:

- **Competitive Salary**: €2,193/month (gross salary for METU).
- **Mobility Allowance**: €600/month
- **Family Allowance**: €495/month (if the candidate is married or is responsible for a dependent).
- **Duration**: The scholarship will be offered for a minimum of **three years**, subject to annual performance evaluation.
- **International Training & Mobility**: The PhD candidates will have opportunities for secondments at partner institutions within the MSCA DN Network.

Regarding MSCA DN project: LeAD aims to train the next generation environmental biotechnologists to address key knowledge gaps and develop models and technologies in anaerobic digestion responding to stressed environmental conditions. The 14 projects are tailored based on the design-build-test-learn cycle to train the doctoral candidates with systems knowledge to deal with challenges for transiting waste removal towards resource recovery through anaerobic digestion. LeAD will educate next-generation talents with competitive transversal skills and capacities both to the academic and non-academic sectors, further profoundly influencing the future bio-economy and society. For other information, please visit

LeAD Project: Https://cordis.europa.eu/project/id/101168769

MSCA DN Network
Main Partners: University Of Galway (Ireland), Universiteit Gent (Belgium), Politechnika Poznanska (Poland), Danmarks Tekniske Universitet (Denmark), Institut National De Recherche Pour L'agriculture, L'alimentation Et L'environnement (Inrae, France), Politecnico Di Torino (Italy), Technische Universitaet Muenchen (Germany)
Associated partners: Glasport Bio Limited, Suez, Inagro, Provinciaal Extern Verzelfstandigd Agentschap In Priv Aatrechtelijke Vorm Vzw, Universite Paris-Saclay, Institut National D'enseignement Superieur Pour L'agriculture, L'alimentation Et L'environnement