



T.C.
MERSİN UNIVERSITY
INSTITUTE OF HEALTH SCIENCES

DEPARTMENT OF MOLECULAR MICROBIOLOGY

GRADUATE PROGRAMS
2025

HISTORY

- The Department of Molecular Microbiology Master's Program is an interdisciplinary program that commenced education in the 2018–2019 academic year.
- Our department consists of 9 faculty members from various disciplines (Medical Microbiology, Medical Biology from the Faculty of Medicine, Pharmaceutical Microbiology from the Faculty of Pharmacy, and Biotechnology and Molecular Biology from the Faculty of Science).
- The Department of Molecular Microbiology is the first graduate program established in this field in Türkiye, and our efforts to launch a doctoral program are ongoing.

ACADEMIC STAFF

Head of Department



Prof. Dr.
GÜLAY BÖREKÇİ

Professors



Prof. Dr.
AYLIN DÖĞEN



Prof. Dr.
GÖNÜL ASLAN



Prof. Dr.
GÜLAY BÖREKÇİ



Prof. Dr.
MEHMET SAMİ SERİN



Prof. Dr.
NURCAN ARAS



Prof. Dr.
SEDA TEZCAN ÜLGER



Associate Professor



Doç. Dr.
MAHMUT ÜLGER



Assistant Professor Dr



Assistant Professor Dr
HARUN GÜLBUDAK



Assistant Professor Dr
MELDA MERAL ÖCAL

FIELDS OF RESEARCH

Our graduate program covers the following areas.

Fields of Molecular Microbiology



PROGRAM COMPETENCIES

Program Learning Outcomes	
No	Program Learning Outcomes: With the successful completion of this program, students will be able to
1	Defines microbial agents that cause disease in humans and knows general properties.
2	Have general knowledge about general bacteriology, virology, parasitology, mycology and immunology.
3	Knows the conventional and molecular methods applied to the recognition of microbial agents.
4	Interpret the laboratory test results.
5	Define and apply microorganisms protection and control methods.
6	Know antimicrobial agents, effect and resistance mechanisms.
7	Know the molecular biology of the cell.
8	Know general information about molecular immunogenetics.
9	Know and apply biosecurity measures in clinical microbiology laboratory.
10	Know industrial microbiology and molecular methods used.
11	Know food and environmental microbiology and molecular methods used.
12	Knows the vectors used in gene therapy.
13	Know basic concepts of molecular genetics.
14	Learn ethical values ??and problems in the field of microbiology science.
15	Gains the ability to access knowledge and interpret knowledge by doing scientific research.
16	Understand the interdisciplinary interaction that is related to the MSc field

PROGRAM COMPETENCIES

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| 17 | They can carry out an independent study of the field of specialization |
| 18 | Has knowledge about scientific research techniques. |
| 19 | Gains the ability to make oral or poster presentations at national and international congresses and symposiums related to the field. |
| 20 | Interpret national and international research articles. |
| 21 | Gain the ability to use the knowledge, problem solving and / or application skills gained in the Master's course in interdisciplinary studies. |
| 22 | Knows the basic principles of human anatomy. |
| 23 | Knows the structure, function and features of the human organism. |
| 24 | Distinguish between normal and abnormal structures of tissues and organs in human anatomy. |
| 25 | Knows the chemical properties of the elements in the living structure. |
| 26 | Knows the bond structure and functional groups of molecules in the living structure. |
| 27 | Knows energy metabolism and mechanisms. |
| 28 | Knows hormones and hormone-effective compounds |
| 29 | Karbonhidrat, lipit, protein, enzim ve nükleik asitlerin kimyasal özelliklerini ve işlevlerini bilir. |
| 30 | Gains knowledge about the realization, maintenance and regulation of body functions in the structure extending from the cell to the systems |
| 31 | Knows the physiology of all systems in the human organism. |

EMPLOYMENT OPPORTUNITIES

Research Careers



Academic Positions

Work at universities as a research assistant, lab manager, or specialist



Research Institutes

Principal investigator or researcher at research institute such as TÜBİTAK, TAGEM, and TÜSEB



International Centers

International research centers (EMBL, Pasteur Institute, etc.) and exchange programs (Erasmus+, Horizon Europe projects)

Molecular Diagnostic Laboratories



Hospital Laboratories

Molecular diagnostic laboratories in hospitals.



Public Health Laboratories

Public health laboratories.



Private Diagnostic Centers

Private diagnostic centers (biotechnology companies, private hospitals).

EMPLOYMENT OPPORTUNITIES

Biotechnology and Pharmaceutical Sector



Vaccine Development

Developing vaccines, biologic drugs, and antimicrobial products.



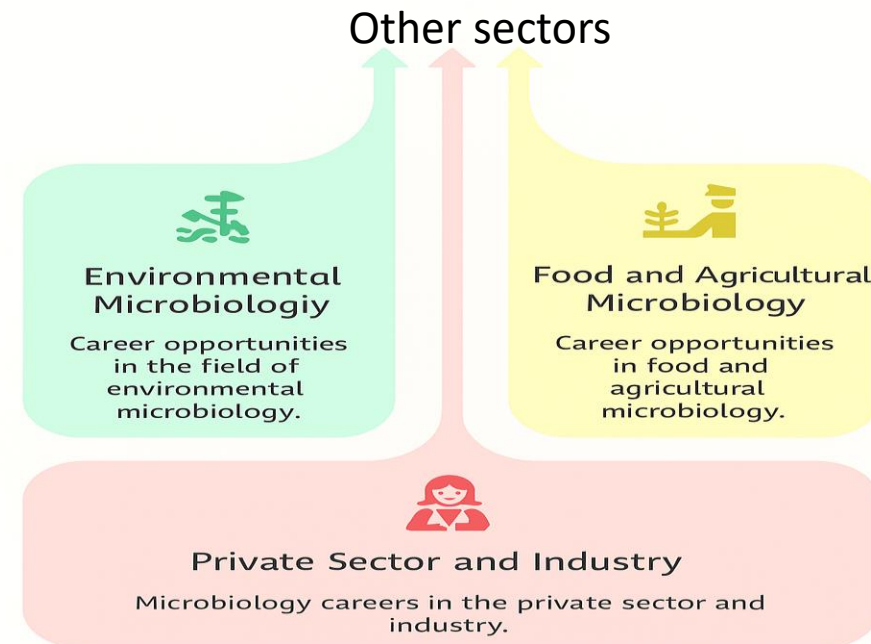
Molecular Test Kits

Production of molecular test kits, e.g., COVID-19 PCR kits.



R&D Laboratories

Working as a researcher or expert in R&D laboratories.



CONTACT

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