



Seminar on Multidisciplinary Strategies For Combatting Antibiotic Resistance

On April 24, 2026

Funded by TÜBİTAK (Grant No:124S727)



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Ankara Yıldırım Beyazıt University, Faculty of Engineering and Life Sciences, 15 Temmuz Şehitleri Campus, Ankara, Türkiye

Participation certificates will be provided.
Please scan the QR code for registration



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Registration: 08:50 – 09:20

Opening Speech

09:20 – 09:30

Assoc. Prof. Fatma D. Güzel

Ankara Yıldırım Beyazıt University



Perspectives on Public Health

09:30 – 09:50

Dr. Ecz. Melda Keçik

Public Health Toxicologist



Airborne Surveillance and Aquatic Resistome Dynamics at the One Health Interface

09:50 – 10:20

Dr. Muhammad Asaduzzaman

University of Oslo, Norway



Relationship Between Antibiotics, Porins, VBNC State, and Bioinformatics Analyses

10:20 – 10:40

Dr. Gülçin Çetin

Bilecik Şeyh Edebali University



Coffee Break: 10:40 – 11:00

Advancing Antimicrobial Therapies: Formulation Insights with Polymeric Nanoparticles

11:00 – 11:30

Senior Lecturer, Dr. Asma Buanz

University of Greenwich, UK



Chip-Based Pathogen Detection

11:30 – 12:00

Prof. Ugur Tamer

Gazi University



Colorimetric Phenotypic Antibiotic Susceptibility Tests

12:00 – 12:30

Prof. İsmail Öçsoy

Erciyes University



Lunch Break: 12:30 – 13:30

Electrophysiological Approaches for the Single Channel Characterization of Porin Channels

13:40-13:50

Dr. Aliakbar Ebrahimi

Ankara Yıldırım Beyazıt University



The Impact of Modern Software Solutions on Healthcare Providers

13:50-14:00

Dr. Abdulkarim Lahmuni

ClinicDeep LTD.



Development of Point of Care Technologies for Improved Antibiotic Stewardship

14:00-14:25

Prof. Damion Corrigan

University of Strathclyde, UK

Online



Conformational Plasticity of Mtb. Ndh: Implications for Structure-Based Drug Design

14:25 – 14:50

Assoc. Prof. Carolina Estarellas

Universitat de Barcelona, Spain

Online



Bio-Based Molecularly Imprinted Nanoplatfoms for Antibiotic Recognition

14:50 – 15:15

Assoc. Prof. Pinar Çakır Hatir

İstinye University



Coffee Break
15:15 – 15:30

Workshop Session
15:30-17:00

Poster Session
15:30-17:00



Workshop on Electrochemical and Nanopore Biosensors

On April 24, 2026

Funded by TUBİTAK
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Electrochemical Biosensors

 **Presenter:**
Assoc. Prof. Nimet Yıldırım Tırğil



Nanopore Sensors

 **Presenter:**
Dr. Aliakbar Ebrahimi



Electrochemical Biosensors

Introduction to Electrochemical Biosensors

- Definition and scope of biosensors
- Key components: biorecognition element, transducer, signal processing

Fundamentals of Electrochemical Biosensors

- Basic components of biosensors
- Electrochemical sensing principles

Electrochemical Biosensor Design and Applications

- Detection of biomolecular interactions examples from clinical, environmental, and research applications
- Sensitivity, selectivity, and performance parameters

Overview of Electrochemical Measurement Techniques

- Basic voltammetric and impedance methods
- Basic interpretation of electrochemical signals

Experimental Section: Measurement Demonstration

- Measurement setup and electrode configuration
- PalmSens device and software interface
- Demonstration of a sample electrochemical measurement

Nanopore Sensors

Introduction to Nanopore Sensors

- Solid-state nanopores: fabrication and properties
- Biological nanopores: structure and function

Fundamentals of Single-Channel Electrophysiology

- Planar lipid bilayer membrane system
- Principle of measuring channel currents

Analysis of Antibiotic-Porin Interactions

- Channel blockage and passage events
- Investigation of interactions at the single-molecule level

Overview of the Single-Channel Measurement System

- General structure of the experimental setup
- Basic interpretation of measurement signals

Experimental Section: Measurement Demonstration

- Display of sample channel current recordings
- Interpretation of antibiotic interaction signals