ISTANBUL AYDIN UNIVERSITY
FACULTY OF PHARMACY

E-NEWSLETTER

1 FEBRUARY - 28 FEBRUARY 2026

ISTANBUL AYDIN UNIVERSITY
FACULTY OF PHARMACY

DEPARTMENTS

Department of Pharmaceutical Technology

- Pharmaceutical Technology

Department of Professional Pharmaceutical Sciences

- Pharmacology
- Pharmaceutical Chemistry
- Pharmacognosy
- Pharmaceutical Toxicology

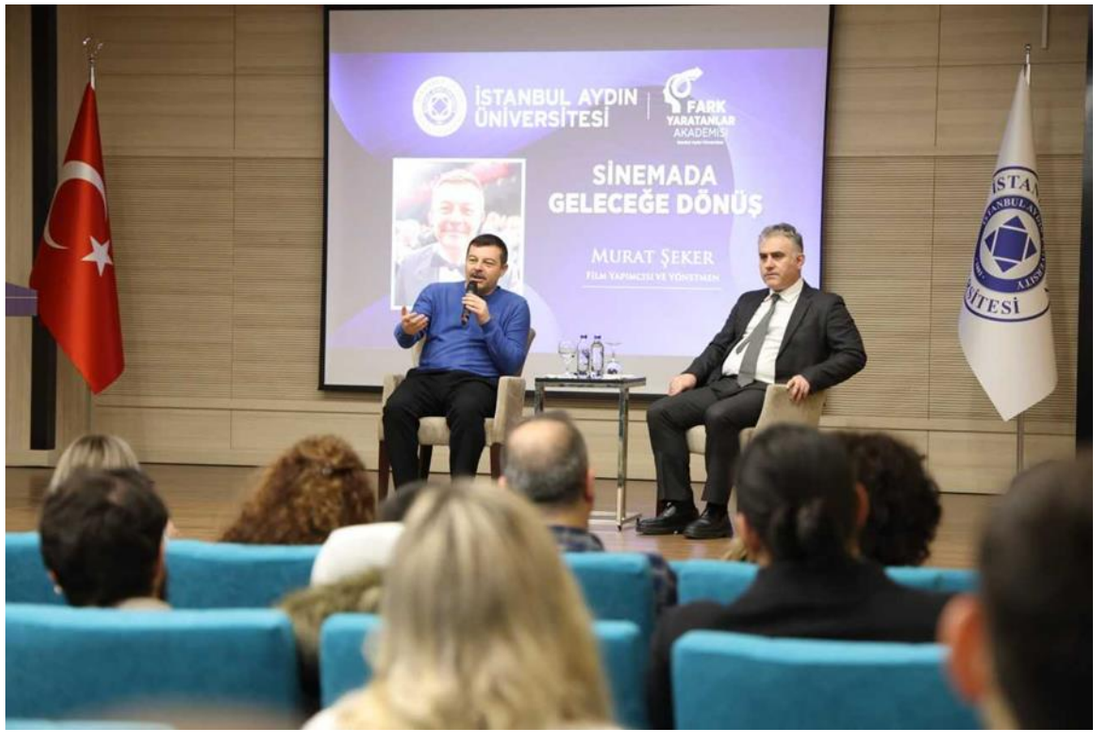
Department of Basic Pharmaceutical Sciences

- Analytical Chemistry
- Biochemistry
- Pharmaceutical Microbiology

The 6th Talk of the "Difference Makers Academy" Was Held

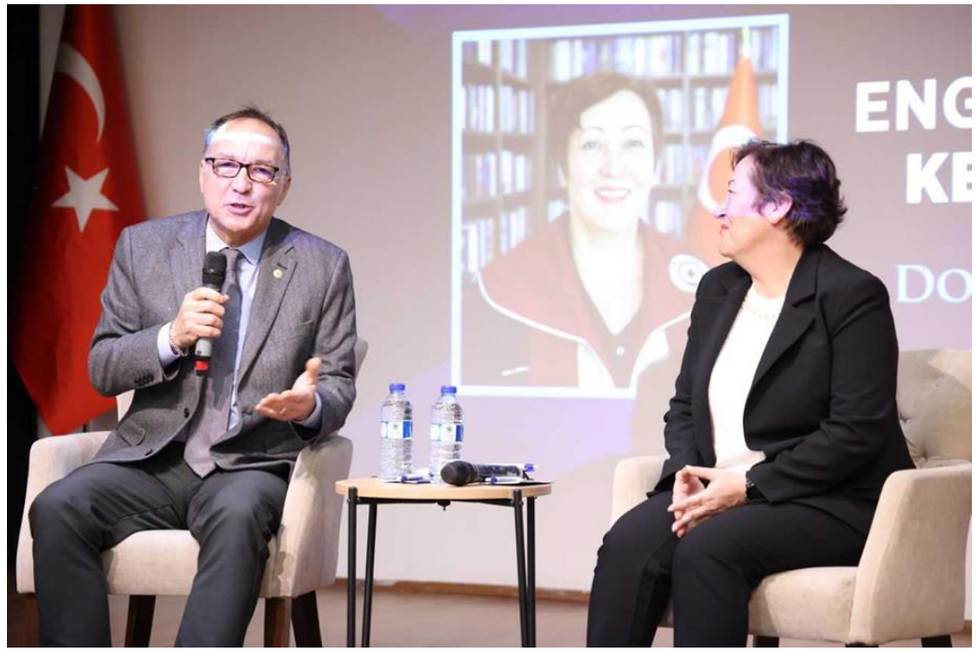
The sixth talk of the seminar series organized within the scope of the "**Difference Makers Academy**," chaired by our Dean Prof. Dr. Ayşe Nurten ÖZDEMIR, was held on Tuesday, February 24 at 14:00 in the T Block Turquoise Hall. The event featured film director Murat ŞEKER as the guest speaker and was moderated by our Vice Rector Prof. Dr. Ragıp Kutay KARACA. Within the framework of the theme "**Back to the Future in Cinema**," Murat ŞEKER shared his experiences in the film industry with the participants and emphasized the importance of creative thinking, storytelling, and producing content in a rapidly changing media landscape. He also evaluated the transformation of cinema from past to present and shared his perspectives on the future of cinema.

The talk, which was held with high student participation, drew attention with the active contributions of students during the questions and answer session; the questions asked demonstrated that the program achieved its purpose.

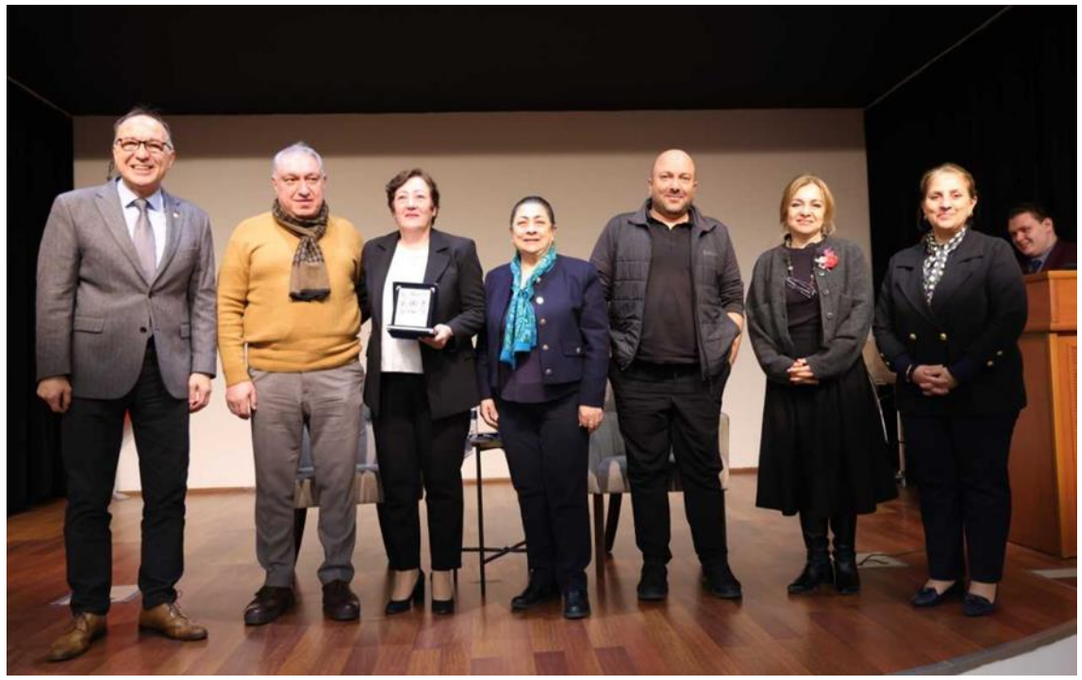


The 5th Talk of the “Difference Makers Academy” Successfully Held

The fifth talk of the “Difference Makers Academy”, conducted under the coordination of our Dean Prof. Dr. Ayşe Nurten ÖZDEMIR, was held on Tuesday, February 11, at 2:00 p.m. in the D Block Orange Hall. The event was organized with the participation of Assoc. Prof. Dr. Dilek YAŞAR, a faculty member of the Department of Interior Architecture at the Faculty of Architecture, as the speaker, and moderated by Prof. Dr. Özer KAMBUROĞLU, Dean of the Faculty of Communication.



Assoc. Prof. Dr. Dilek YAŞAR, an interior architect, emphasized the importance of personal development, perseverance, and determination in the journey to success in her talk, delivered under the slogan “Compete not with obstacles, but with yourself.” Drawing on her own experiences, Yaşar shared inspiring insights with the participants and stated that the greatest strength in overcoming obstacles lies within the individual. The talk, held with strong participation from both academics and students, proved to be inspiring for all attendees and demonstrated that the program achieved its purpose.



FACULTY OF PHARMACY

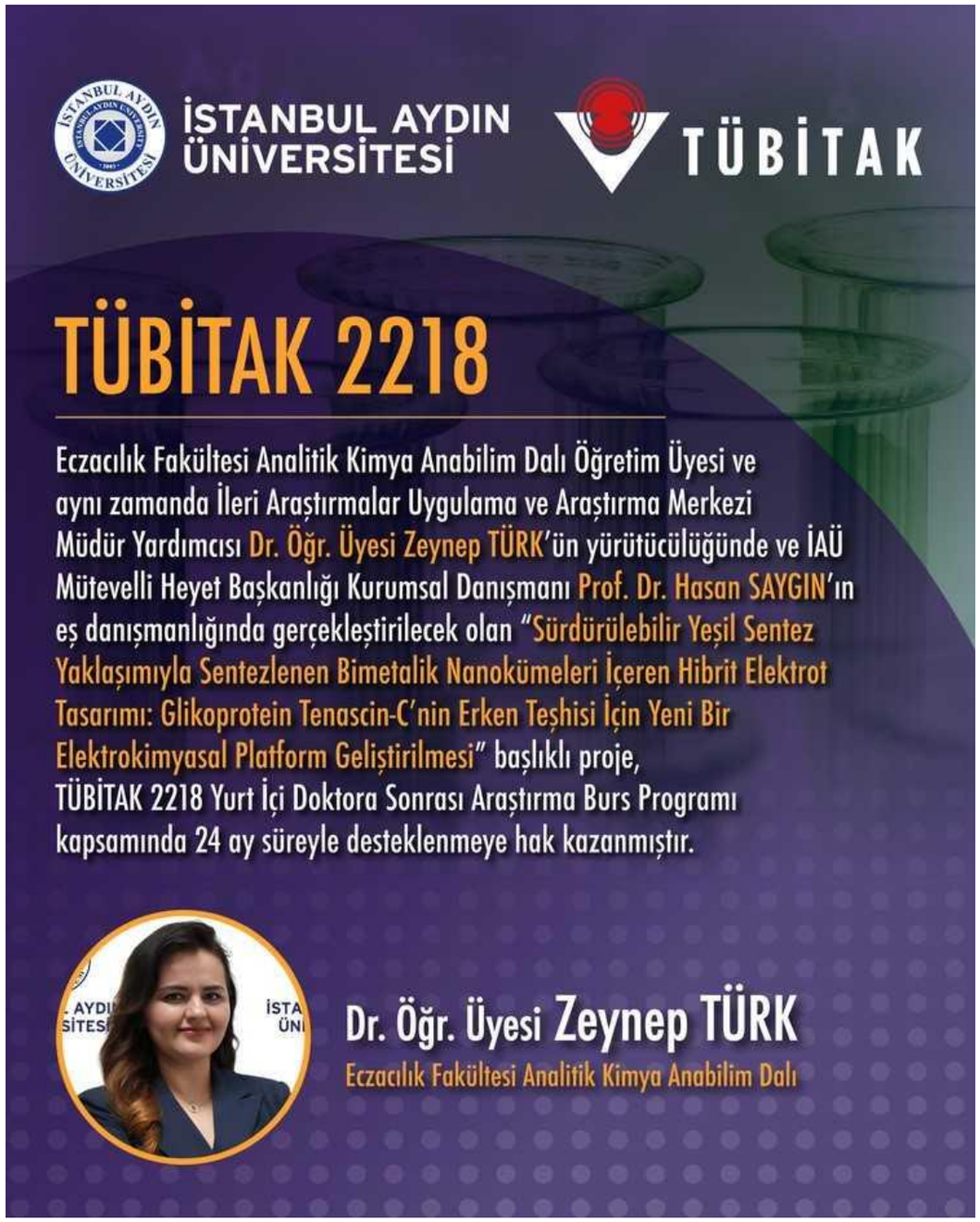
February

TÜBİTAK 2218 Project of Our Faculty Member Has Been Approved for Funding

The research project led by Dr. Zeynep TÜRK, Assistant Professor in the Department of Analytical Chemistry, Faculty of Pharmacy, has been approved for funding within the scope of the **TÜBİTAK 2218 – Domestic Postdoctoral Research Fellowship Program**.

The project entitled "*Design of a Hybrid Electrode Incorporating Bimetallic Nanoclusters Synthesized via a Sustainable Green Synthesis Approach: Development of a Novel Electrochemical Platform for the Early Detection of Glycoprotein Tenascin-C*" will be conducted for a period of 24 months under the co-supervision of Prof. Dr. Hasan SAYGIN.

We congratulate our distinguished faculty member on this significant academic achievement and wish her continued success in her research activities.



The study titled "*Electrochemical Determination of Anticancer Drug Vandetanib on a Glassy Carbon Electrode*" by Assist. Prof. Dr. Cem ERKMEN, a faculty member of our Department of Analytical Chemistry, has been published in the TR-indexed journal **Cumhuriyet Science Journal.**

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Electrochemical Determination of Anticancer Drug Vandetanib on Glassy Carbon Electrode

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Research Article

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ABSTRACT

This study presents a novel, simple, and cost-effective electrochemical method for the sensitive determination of Vandetanib (VAN), a clinically important tyrosine kinase inhibitor, using an unmodified glassy carbon electrode (GCE). The electrochemical behavior of VAN was investigated via cyclic voltammetry (CV) and differential pulse voltammetry (DPV) over a wide pH range, an adsorption-controlled irreversible oxidation process involving equal numbers of protons and electrons, indicating a proton-coupled electron transfer mechanism. Optimization of experimental parameters, including pH, accumulation time, and accumulation potential, demonstrated that 0.5 M H_2SO_4 (pH 0.3) and an accumulation time of 90 seconds provided optimal analytical performance. The DPV method exhibited excellent linearity between 2×10^{-8} M and 1.5×10^{-6} M VAN concentrations, with a low detection limit of 5.58×10^{-9} M. The proposed approach achieved high repeatability with relative standard deviations below 1.2%. Compared to previously reported methods involving complex electrode modifications, this work emphasizes the practicality of a bare GCE platform, eliminating the need for surface modification or surfactant addition. The method's simplicity, sensitivity, and environmental friendliness make it a promising alternative for rapid VAN quantification.

Keywords: *Anticancer drug, Electrochemical sensor, Glassy carbon electrode, Pharmaceutical analysis, Voltammetry*

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The study titled *"Unveiling the cellulolytic bacteria colonizing multiple library cultural heritage assets by leveraging various cultivation-based and molecular approaches"* by Assist. Prof. Dr. Tuğçe TÜCCAR, a faculty member of our Department of Pharmaceutical Microbiology, has been published in the Q1-ranked journal **Journal of Cultural Heritage.**

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Original article

Unveiling the cellulolytic bacteria colonizing multiple library culture heritage assets by leveraging various cultivation-based and molecular approaches

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ABSTRACT

One of the major challenges in preservation and long-term sustainability of historical manuscripts (HMs) is their vulnerability to biodegradation caused by bacterial enzymatic activity. Among these, cellulolytic bacteria pose a significant threat, as they degrade the cellulose-based components that form the structural backbone of paper materials through the action of cellulases. However, the diversity and abundance of total and cellulolytic bacteria on damaged HMs remain poorly understood due to the lack of standardized sampling, culture media, and identification methods. This study aims to address this knowledge gap by revealing these bacterial communities using various identification approaches and evaluating the methodological factors affecting their detection and isolation. Samples were collected from ten deteriorated HMs from the Süleymaniye Manuscript Library. Two sampling techniques (nitrocellulose membrane filter and swab) were compared in combination with two culture media (R2A and TSA). The bacterial communities were analyzed using denaturing gradient gel electrophoresis (DGGE). In addition, culturable isolates were screened for cellulolytic activity and identified by molecular technique. DGGE analysis produced no results with individual sampling methods, whereas combining samples and performing nested polymerase chain reaction yielded successful outcomes. DGGE and culture findings indicated that bacterial communities were specific to each HM, with every sample hosting a distinct microbiota. The culture-independent detection of opportunistic pathogenic *Escherichia coli and Finegoldia magna* on HMs suggests potential risks not only to integrity of the manuscript but also to human health. Moreover, HMs may act as a potential reservoir of pathogenic microorganisms. The presence of *Cutibacterium acnes*, a member of the skin microbiota not previously reported in HMs, as above bacteria, likely reflects contamination during examination or restoration. The culture findings showed that the sampling method significantly affected both bacterial abundance and diversity. The nitrocellulose membrane method was found to be particularly effective for the isolation of cellulolytic bacteria, whereas the swab method yielded a higher total bacterial abundance. The culture medium had minimal influence on cellulolytic bacterial variation. *Bacillus* spp. were the most commonly detected cellulolytic bacteria. For the first time in HM samples, DGGE analysis revealed bacteria from several previously undetected genera, including *Cupriavidus, Escherichia, Lawsonella, Parapusillimonas, Pusillimonas*, and *Salinimicrobium*, while culture-dependent methods indi-

FACULTY OF PHARMACY

February

Career Orientation Meeting with Students of Private Beylikdüzü Modern Sciences Academy (MBA) Science High School

Dr. Gizem Sena ELAGÖZ, a faculty member of our Department of Pharmaceutical Toxicology, met with 11th and 12th grade students on February 20, 2026, at 11:00 as part of an event organized by Private Beylikdüzü Modern Sciences Academy (MBA) Science High School, together with Prof. Dr. Sabri Hasan MERIÇ, a faculty member of the Faculty of Dentistry.

During the event, Dr. ELAGÖZ provided students with information about the scope of the pharmacy profession, its contributions to society, and career opportunities. She also addressed the educational process and academic opportunities offered at our faculty. The event, where students' questions were answered, was held in a productive and engaging environment that contributed to their career choice process.

At the end of the event, the school's guidance counselor and students expressed their gratitude to our academics for their valuable contributions.