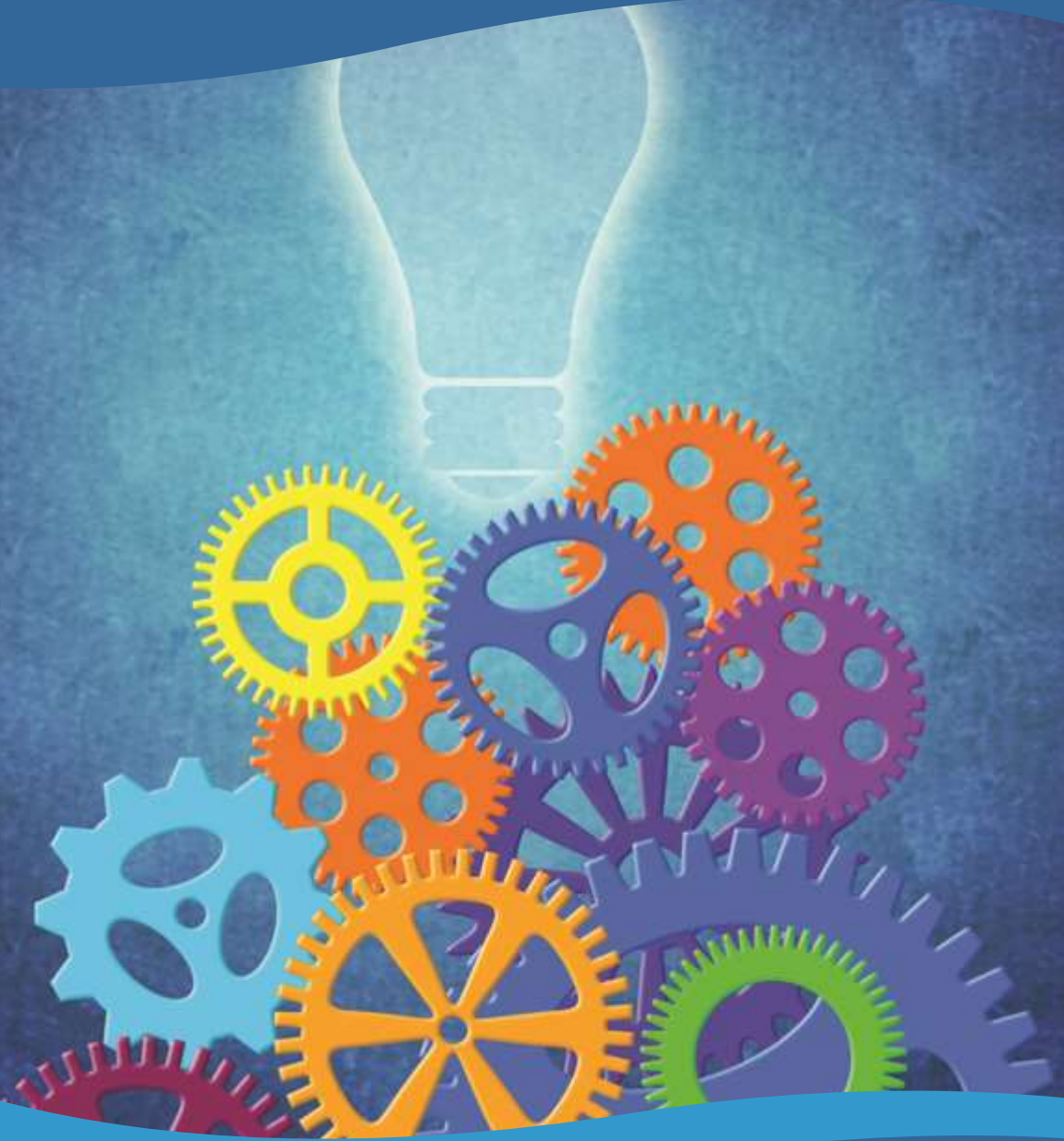


# ICAENS 2026



**9th International Conference on Applied Engineering and  
Natural Sciences ICAENS 2026**

April 06-07, 2026: Konya, Turkey

**Abstract Book**

ABSTRACT BOOK OF  
9TH INTERNATIONAL  
CONFERENCE ON  
APPLIED ENGINEERING  
AND NATURAL  
SCIENCES ICAENS 2026

ABSTRACT BOOK OF 9TH ICAENS 2026:

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**06-07 April 2026**

**Konya, Turkey**

**Publication date: 15.04.2026**

**Publisher: All Sciences Academy**

Abstract Book of 9th International Conference on Applied Engineering and Natural Sciences ICAENS 2026

<https://www.icaens.org/>

9th International Conference on Applied Engineering and Natural Sciences ICAENS 2026: edited by All Sciences Academy.

ISBN: 978-625-8993-15-8

As this is a serial book published, it has ISBN. All abstracts were peer reviewed.

ISBN: 978-625-8993-15-8

Printed in the Turkey with ISBN 978-625-8993-15-8

International Conference Website

<https://www.icaens.org/>

## **INTRODUCTION**

We had the great honor of 9th International Conference on Applied Engineering and Natural Sciences ICAENS 2026. It was truly a great pleasure for us to greet a lot of participants from many different countries to attend ICAENS 2026! We firmly believe that the conference will become an important international event in the field of cross-industry discussion about innovations in Academic Studies.

Three cooperating organizations supported the two-day conference. There were 161 papers accepted for presentation at ICAENS 2026, contributed from different countries. We had plenary speeches and several well-known scientists and experts, to give invited talks at different sessions.

The purpose of ICAENS 2026 was to provide a forum for the participants to report and review innovative ideas, with up-to-date progress and developments, and discuss novel approaches to the application in the field of their own research areas and discuss challenges of doing science.

We sincerely hope that the exchange of ideas on doing research, science and improving education will help the participants, and international cooperation sharing the common interest will be enhanced.

On behalf the Organization Committee of ICAENS 2026, we would like to heartily thank our cooperating organizations for all they have done for the conference. We would also like to thank the authors for their contribution to the proceedings; the participants and friends of ICAENS 2026, for their interest and efforts in helping us to make the conference possible; and the Editorial boards for their effective work and valuable advice, especially the ICAENS 2026 secretariat and the ICAENS 2026 staff, for their tireless efforts and outstanding services in preparing the conference and publishing the Proceedings.

Publisher: All Sciences Academy

	induced Alzheimer 's disease in Albino mice; a mechanistic approach	Akhtar		
18	Precision ecology, Deep Learning and computer vision "YOLO" Using Roboflow and Ultralytics Libraries for the detection of and response to rare, protected and endemic species (Saida, western Algeria).	Aouadj Sid Ahmed, Houari Hadj Habib, Nouar Belgacem, Khatir Hadj, Tabeche Ali, Bouhadiba Sultana, Bekhedda Hadjer, Hamad Hanane, Hanis Fawzia, Benyekhlef Benkaddour	Algeria, Algeria, Algeria, Algeria, Algeria, Algeria, Algeria, Algeria, Algeria, Algeria	Submission 21
19	Contribution to the study of mortar resistance to acid attack	Ben Ammar Ben Khadda	Algeria	Submission 22
20	Comparative Analysis of HEC-RAS 2D and IBER 2D for Flach Flood Modeling in Semi-Arid Urban Areas Using Low-Resolution Topographic: A Case Study of El Bayadh City	Djafri Sid Ali, Benabid Seyfeddine, Djafri Samia, Khemili Khalil	Algeria, Algeria, Algeria, Algeria	Submission 23
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22	Tuning Dielectric and Optical Properties of La/Nb Co-Doped BaTiO <sub>3</sub> Ceramics	Marwa JEBLI	Tunisia	Submission 25
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Çaycuma Meslek Yüksekokulu Müdürlüğü



Sayı :E-84604848-903.07.04-371012  
Konu : Bilimsel Toplantı Görevlendirme

01.11.2023

İLGİLİ MAKAMA

İlgi : Öğretim Üyesi Doç. Dr. Nermin KİŞİ'nin 30.10.2023 tarihli dilekçesi.

Yüksekokulumuz Yönetim ve Organizasyon Bölümü Öğretim Üyesi Doç. Dr. Nermin KİŞİ'nin "All Sciences Academy Yayınevi"nin düzenleyeceği bilimsel toplantıların düzenleme ve bilim kurullarında görev almasında Yüksekokulumuzca bir sakınca bulunmamaktadır. İş bu belge ilgilinin isteği üzerine tanzim edilmiştir.

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Adres : BEÜ Çaycuma Meslek Yüksekokulu, 67900, Çaycuma, Zonguldak  
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Kep Adresi : beun@hs03.kep.tr

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## ***Pseudomonas aeruginosa* as a Major Pathogen in Wound- and Burn-Associated Infections**

Olena Kotsar <sup>1</sup>, Olena Kochnieva <sup>2\*</sup>

<sup>1,2</sup>Department of Microbiology, Virology and Immunology named after D.P. Grynyov,  
Kharkiv National Medical University, Ukraine

<sup>\*</sup>([ov.kochnieva@knmu.edu.ua](mailto:ov.kochnieva@knmu.edu.ua)) Email of the corresponding author

**Abstract** – The high incidence of wound infections in patients with blast injuries and burn lesions underscores the clinical relevance of this problem in modern medicine. Gram-negative bacteria play a key role in the development of nosocomial infections, among which *Pseudomonas aeruginosa* is particularly important. This microorganism is characterized by both intrinsic and acquired antimicrobial resistance, which significantly complicates treatment, limits therapeutic options, and contributes to severe complications in hospitalized patients. The aim of this study was to determine the composition of the wound microbiome in patients with blast injuries and burn disease, to evaluate the antimicrobial susceptibility of clinical isolates, and to assess the prevalence of multidrug-resistant (MDR) and extensively drug-resistant (XDR) *P. aeruginosa* strains. A total of 32 clinical isolates of *P. aeruginosa* obtained from wound samples were included. Microbiological analysis was performed according to EUCAST standards. Antimicrobial susceptibility was determined using the disk diffusion method. Statistical analysis was conducted using the  $\chi^2$  test with a significance level of  $p < 0.05$ . Results showed that gram-negative microorganisms accounted for 53% and gram-positive for 47% of isolates. *P. aeruginosa* was detected in 11% of wound infection cases. The highest *in vitro* activity was observed for ceftazidime/avibactam, meropenem, and amikacin. MDR strains accounted for 11.9% of isolates, while 76.5% belonged to XDR and exhibited resistance to most antibacterial agents. These findings highlight the necessity of continuous microbiological monitoring, rational antibiotic use, and optimization of empirical therapy to reduce the incidence of complications and nosocomial infections.

**Keywords** – *Pseudomonas aeruginosa*, antimicrobial resistance, blast injuries, burn disease, complications, nosocomial infections

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