MIMIC-VI

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European Journal of Immunology Basic • Clinical • Translational

ACIBADEM UNIVERSITY

TURKISH SOCIETY OF IMMUNOLOGY

6th INTERNATIONAL MOLECULAR IMMUNOLOGY & IMMUNOGENETICS CONGRESS (MIMIC-VI)



April 28 - 30, 2025

ACIBADEM UNIVERSITY

ISTANBUL, TÜRKİYE

mimic2025.org

ABSTRACT BOOK

6th INTERNATIONAL MOLECULAR IMMUNOLOGY & IMMUNOGENETICS CONGRESS (MIMIC-VI)

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SCIENTIFIC PROGRAM

MONDAY, APRIL 28th, 2025	
09:00 – 10:30	**REGISTRATION**
10:30 – 11:30	**OPENING CEREMONY** Opening Speeches by the Host and Organizers Moderators: **Tolga Sütlü, İhsan Gürsel**
11:30 – 12:30	**KEYNOTE LECTURE** Moderators: **Günnur Deniz, Barbaros Oral** Human T cells: differentiation, defense, and regulation **Federica Sallusto** *ETH Zurich, CH*
12:30 – 13:00	**CONGRESS PHOTO SHOOT (MAIN HALL STAGE)**
13:00 – 14:00	**LUNCH BREAK**
14:00 – 15:30	**IMMUNE RESPONSE TO INFECTION** Moderators: **Mayda Gürsel, Akif Turna**
14:00 – 14:30	Host-Plasmodium interactions: One step closer to malaria vaccines **Cevayir Çoban** *The University of Tokyo, JP*
14:30 – 15:00	Emerging Infections and Immunology **Önder Ergönül** Koç University, TR
15:00 – 15:15	**OP-01** Investigation of SARS-CoV-2 Nucleocapsid and Spike N501Y Variant-Specific IgG Subtypes in Convalescent Pediatric Patients from COVID-19 Using Multiplex Flow Cytometric Bead-Based Assay **Mehmet Karaçay** *Istanbul Technical University, TR*
15:15 – 15:30	**OP-02** Development and Evaluation of the Efficacy of a Novel Monoclonal Antibody Targeting CX3CR1 for Pain Relief in Pancreatic Cancer, Chronic and Acute Pancreatitis **Deniz Baybağ** *Acibadem University, TR*

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MONDAY, APRIL 28th, 2025	
15:30 – 16:00	**SATELLITE SYMPOSIUM** SARTORIUS From Concept to Cure: The Role of Platform Development in Cell Therapy **Érica A. Schulze**
16:00 – 16:30	**COFFEE BREAK**
16:30 – 18:30	**CANCER IMMUNOLOGY AND IMMUNOTHERAPY** Moderators: **Güneş Esendağlı, Ceren Çıracı**
16:30 – 17:00	Insights into NK cell cytotoxicity – how to select the best (serial) killer for cancer therapy? **Carsten Watzl** *Technical University Dortmund, DE*
17:00 – 17:30	mRNA based cancer therapeutics **Mustafa Diken** *Johannes Gutenberg University, DE*
17:30 – 18:00	Biological sex at the intersection of cancer-neuro-immune crosstalk **Defne Bayık** *University of Miami, USA*
18:00 – 18:15	**OP-3** End-to-end Vector and Process Development for Clinically Applicable CD19-targeted CAR-T Cell Production in Türkiye **Betül Çakıcı** *Acibadem University, TR*
18:15 – 18:30	**OP-4** Characterization of tumor-infiltrating CD66b+ monocyte subset discloses NF-kB-mediated differentiation **Hamdullah Yanık** *Hacettepe University, TR*
18:30 – 19:00	**COFFEE BREAK**
19:00 – 21:00	**TSI GENERAL ASSEMBLY MEETING**

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TUESDAY, APRIL 29th, 2025	
09:00 – 10:30	**IMMUNE SYSTEM IN HEALTH AND DISEASE** Moderators: **Arzu Aral, Batu Erman**
09:00 – 09:30	Unveiling the molecular basis of T cell malfunctions and disorders using quantitative interactomics **Bernard Malissen** *Centre d'Immunologie INSERM-CNRS, FR*
09:30 – 10:00	The intersection of innate and adaptive immunity in the lung: implications for chronic pulmonary insufficiency **Sidonia Fagarasan** *RIKEN, JP*
10:00 – 10:15	**OP-5** Asparagine availability controls germinal center B cell homeostasis **Yavuz F. Yazıcıoğlu** *University of Oxford, UK*
10:15 – 10:30	**OP-6** Investigating the tumor immune microenvironment through innovative data analysis interfaces **Atakan Ekiz** *İzmir Institute of Technology, TR*
10:30 – 11:00	**SATELLITE SYMPOSIUM** BD FACSDiscover™ A8, The First Spectral Cell Analyzer with Real-Time Imaging **Tim Schenkel**
11:00 – 11:30	**COFFEE BREAK**
11:30 – 13:00	**MOLECULAR MECHANISMS IN AUTOIMMUNITY** Moderators: **Güher Saruhan Direskeneli, Eda Tahir Turanlı**
11:30 – 12:00	Immunological memory – a roadblock to regeneration of tolerance in autoimmunity **Andreas Radbruch** *Charité – Universitätsmedizin Berlin, DE*
12:00 – 12:15	**OP-7** Innate lymphocyte activation and interferon-driven pathways in Behçet's disease skin lesions **Atay Vural** *Koç University, TR*
12:15 – 12:30	**OP-8** Phosphorylation of signaling molecules in peripheral and thymic B cells and responses to T follicular helper cell-related cytokines in myasthenia gravis **Cemre Aktaş** *Istanbul University, TR*
12:30 – 12:45	**OP-9** CD22 Defines a Core Follicular Regulatory T Cell Subset that Controls the Antibody Response **Fatma Betül Öktelik** *Istanbul University, TR*

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TUESDAY, APRIL 29th, 2025	
12:45 – 13:30	**BALLOON RELEASE EVENT IN CELEBRATION OF "DAY OF IMMUNOLOGY" & "WORLD PRIMARY IMMUNODEFICIENCY WEEK"**
13:30 – 14:30	**LUNCH BREAK**
14:30 – 16:30	**INBORN ERRORS OF IMMUNITY** Moderators: **Yıldız Camcıoğlu, Ahmet Özen**
14:30 – 15:00	Immunoregulatory Functions of DOCK/STAT Complexes **Talal Chatila** *Boston Children's Hospital, USA*
15:00 – 15:30	Targeted Therapies in Inborn Errors of Immunity **Elif Karakoç Aydıner** *Marmara University, TR*
15:30 – 16:00	Inborn errors of immunity research in Türkiye: Results from a specialized research center "Can Sucak Lab" **Baran Erman** *Hacettepe University, TR*
16:00 – 16:15	**OP-10** Therapeutic Use of Bone Marrow-Derived Tolerogenic Dendritic Cells Modified by Lentiviral Transduction in CIA Model **Gözde Arslan** *Bursa Uludağ University, TR*
16:15 – 16:30	**OP-11** B and T Lymphocyte Subgroups in Patients with Selective IgA Deficiency **Semra Demir** *Istanbul University, TR*
16:30 – 17:00	**COFFEE BREAK**
17:00 – 18:00	**DAY OF IMMUNOLOGY LECTURE** Moderator: **Günnur Deniz (EFIS President-elect)** The immunology of sickness metabolism caused by a viral infection **Bojan Polic** *EFIS President. University of Rijeka, HR*
18:00 – 20:00	**POSTER SESSION**

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WEDNESDAY, APRIL 30th, 2025	
09:00 – 10:30	**EXOSOMES AND THE IMMUNE SYSTEM** Moderators: **İhsan Gürsel, Sinem Öktem Okullu**
09:00 – 09:30	A fresh look at classic immunology through the perspective of extracellular vesicles **Edit Buzas** *Semmelweis University, HU*
09:30 – 10:00	Dendritic cell derived extracellular vesicles for immune therapy of cancer **Susanne Gabrielsson** *Karolinska Institutet, SE*
10:00 – 10:15	**OP-12** Leishmania infantum Extracellular Vesicles Mediate Protection from Visceral Leishmaniasis and Long-Term Cross Protection from Cutaneous Leishmaniasis **İsmail Cem Yılmaz** *İzmir Biomedicine and Genome Center, TR*
10:15 – 10:30	**OP-13** Immunological Profiling Following SARS-CoV-2 Vaccination **İrem Evcili** *İzmir Biomedicine and Genome Center, TR*
10:30 – 11:00	**SATELLITE SYMPOSIUM** Advice and Advancements for the Flow Cytometric Analysis and Sorting of Extracellular Vesicles **Owen Hughes**
11:00 – 11:30	**COFFEE BREAK**
11:30 – 13:00	**EMERGING TECHNOLOGIES IN IMMUNOLOGY** Moderators: **Tolga Sütlü, Uğur Sezerman**
11:30 – 12:00	**EMBO Young Investigator Lecture** Physics of cells as a measure of immune cell functional states **Erdinç Sezgin** *Karolinska Institutet, SE*
12:00 – 12:30	Tissue-resident memory T cells identified in the muscle of patients with myositis using single-cell RNA sequencing **Begüm Horuluoğlu** *Karolinska Institutet, SE*
12:30 – 12:45	**OP-14** Discovery of Tumor-Specific T Cell Receptors Through Single-Cell Sequencing of Tumor-Infiltrating Lymphocytes in Melanoma **Elif Çelik** *Acibadem University, TR*
12:45 – 13:00	**OP-15** Investigating alternative polyadenylation sites in tumor-associated macrophage differentiation at single-cell resolution **Ebru Kocakaya** *Ege University, TR*

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WEDNESDAY, APRIL 30th, 2025	
13:00 – 13:30	**SATELLITE SYMPOSIUM** Advancing Immunology with 10X Genomics: Single-Cell & Spatial Innovations **Bio Koen De Gelas**
13:30 – 14:30	**LUNCH BREAK**
14:30 – 16:30	**FUTURE VACCINES AND IMMUNOTHERAPIES** Moderators: **Ayça Sayı Yazgan, Selim Badur**
14:30 – 15:00	Chemical switch between A-B-Z form nucleic acids for the in situ Immunotherapy **Ken J. İshii** *The University of Tokyo, JP*
15:00 – 15:30	Advancing Cancer Immunotherapy: The Emerging Role of Engineered NK Cells. **Rafet Başar** *MD Anderson Cancer Center, USA*
15:30 – 16:00	Intercellular metabolic crosstalk as an immunotherapy target in brain tumors **Dennis Watson** *University of Miami, USA*
16:00 – 16:15	**OP-16** Enhancing the Breadth of Protection from Neisseria Meningitidis Infection via Bivalent OMV Vaccine **Zeynep Arzum** *İzmir Biomedicine and Genome Center, TR*
16:15 – 16:30	**OP-17** Production of nanobodies targeting IL-1R1 (interleukin-1 receptor type 1) **Gizem Çile** *Acibadem University, TR*
16:30 – 17:00	**COFFEE BREAK**
17:00 – 17:45	**IŞIL BERAT BARLAN AWARD CEREMONY** Moderators: **Günnur Deniz, Güher Saruhan Direskeneli**
17:45 – 18:30	**CLOSING CEREMONY**

Poster Presentation

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[PP-060]

Artemisinin Triggers Autophagy-Mediated Cell Death in HEPG2 Cells

Mert Karaca[1], Erkan Ermiş[2], Gözde Arslan[1], Salih Haldun Bal[3], Diğdem Yöyen Ermiş[4], Murat Kıyıcı[5], Haluk Barbaros Oral[4]
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Objective: Hepatocellular carcinoma (HCC) is one of the most aggressive and fatal tumors worldwide, accounting for 82% of primary liver cancers. It is the third leading cause of cancer-related mortality and has a very low five-year survival rate (<15%) due to late diagnosis and underlying liver dysfunction. The number of patients eligible for curative treatments is limited, and alternative therapies fail to improve patient survival. Therefore, there is a significant need for prognostic markers and promising therapeutic strategies for HCC. Dysregulation of autophagy has been associated with tumorigenesis in various cancers, and its role in HCC is well documented. Artemisinin, a molecule extracted from *Artemisia annua L.*, was first discovered as an antimalarial agent and awarded the 2015 Nobel Prize. It is known for its immunomodulatory properties, G0/G1 cell cycle arrest at appropriate doses, and apoptotic effects in various diseases. Although different aspects of artemisinin have been investigated, its autophagic effects in hepatocellular carcinoma cells remain understudied. This study aims to investigate the effect of artemisinin on autophagy-mediated cell death in the HepG2 hepatocellular carcinoma cell line.

Materials-Methods: To assess autophagy, the pcDNA3-GFP-LC3-RFP-LC3ΔG plasmid was utilized. The plasmid was amplified in E. coli, isolated via midiprep, and subjected to restriction analysis. HEPG2 cells were cultured, and the optimal artemisinin dose was determined using the MTT assay. Plasmid transfection was performed using Lipofectamine 6000, autophagosome formation was evaluated using EVOS imaging, and cell death analysis was conducted via flow cytometry.

Results and Conclusion: Autophagosomes were clearly visualized, and artemisinin significantly enhanced autophagy-mediated cell death. These findings suggest that artemisinin may serve as a potential therapeutic agent for HCC treatment.

Keywords: Hepatocellular carcinoma, HCC, HEPG2, Artemisia Anua, Artemisinin

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