



İSTANBUL AYDIN ÜNİVERSİTESİ ECZACILIK FAKÜLTESİ

E-BÜLTEN

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Eczacılık Fakültesi Dekan Yrd.

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- Farmasötik Teknoloji Anabilim Dalı

Eczacılık Meslek Bilimleri Bölümü

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- Analitik Kimya Anabilim Dalı
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- Farmasötik Mikrobiyoloji Anabilim Dalı





ECZACILIK FAKÜLTESİ

Nisan

Superdrugs & Supertherapies: High prices to pay for miracles...

Editorial Article

Yusuf ÖZTÜRK*

Istanbul Aydın University, Faculty of Pharmacy, Department of Pharmacology, Istanbul, Türkiye

Today, in Istanbul and other parts of our country, at bus stops, metro stations and on various street corners, we can hear the heartbreaking cries of parents of children with SMA (Spinal Muscular Atrophy) Type-1 seeking financial resources for exorbitantly priced treatment. In fact, this is a gene-based life-saving treatment that is effective in pediatric patients under two years of age with just one dose. This miraculous treatment costs patients approximately \$2.1 million. This miraculous treatment costs patients around \$2.1 million. But that is not all, and it is not the most expensive either, there are others worth mentioning.

After a rocky start, gene therapy is on fire and drawing intense interest from the biopharmaceutical industry—and it's still evolving and improving. In fact, the journey of fundamental developments in gene therapy begins with the discovery of the DNA structure by Watson and Crick in the year of 1953. The concept of gene therapies first emerged in the 1960s, when the feasibility of adding new genetic functions to mammalian cells began to be studied. Several methods for this purpose were tested, including injecting genes directly into a living mammalian cell via a micropipette and exposing the cells to a DNA precipitate containing the desired genes. Later, scientists developed theories that viruses could also be used as a vehicle or vector to deliver new genes to cells. Among the avenues of biomedical sciences, humanity's fast lane, but hard journey to gene therapies began in the 1990s. There are various versions of gene therapies forming different highways to arrive final destination of therapy. But unfortunately, some of these highways of gene therapies have turned into dead-end streets:

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Farmakoloji Anabilim Dalı Öğretim Üyemiz Prof. Dr. Yusuf Öztürk'ün, Q3 indeksli Acta Pharmaceutica Sciea dergisinde "*Superdrugs & Supertherapies: High prices to pay for miracles*" isimli çalışması yayınlanmıştır.



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Dekan Yardımcımız ve Farmasötik Kimya Anabilim Dalı Öğretim Üyemiz Prof. Dr. Sevgi Karakuş'un Q1 indeksli Journal of Drug Delivery Science and Technology dergisinde "*The lenalidomide derivative loaded and quercetin modified MIL-100 based novel drug delivery system for breast cancer treatment*" isimli çalışması yayımlanmıştır.

The lenalidomide derivative loaded and quercetin modified MIL-100 based novel drug delivery system for breast cancer treatment

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Triple negative breast cancer

ABSTRACT

Lenalidomide (L0) is an immunomodulatory agent with a range of effects, including anticancer and anti-inflammatory activity, and is commonly utilized in treating multiple myeloma. A derivative of lenalidomide (L1) has been synthesized to enhance its effects and to target different cancer cell types. In this study, the lenalidomide derivative L1, with the chemical structure 1-[2-(2,6-dioxopiperidin-3-yl)-1-oxoisindolin-4-yl]-3-(p-tolyl)urea, was loaded onto a novel drug delivery system (DDS), and its activity was assessed towards triple-negative breast cancer cell lines (TNBC). MIL-100, a subclass of metal-organic framework (MOF) structures, was synthesized via a microwave-assisted hydrothermal method. MIL-100 was modified with quercetin (QC) as a linker, and its drug loading capacity was optimized, achieving a 95.18 % encapsulation efficiency. Additionally, the antioxidant properties of QC contributed to enhancing the performance of the DDS. *In vitro* drug release studies of the final product, MIL-100@QC@L1, were successfully conducted. The cytotoxic influences of the formulation on MDA-MB-231 cells were assessed using the WST-1 assay. After treatment with 10 µg/mL of MIL-100@QC@L1 for 24 h, the cell viability decreased significantly to 47.8 %, showing superior results compared to treatments with L0 and L1 alone.



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YETEV Okulları Kariyer Günleri '25 Meslek Söyleşileri

Eczacılık Fakültesi Dekan Yardımcımız Doç. Dr. Sevgi Karakuş 9 Nisan 2025 Çarşamba günü **YETEV Okulları Kariyer Günleri'25 Meslek Söyleşileri** kapsamında gerçekleştirilen programda Eczacılık mesleği ve Eczacılık eğitimi konusunda kaliteli ve farkındalık oluşturan paylaşımlar gerçekleştirmiştir.



9 NISAN
ÇARŞAMBA

10.30 - 13.00 Meslek Söyleşileri



Ümmühan UÇAR
Beslenme ve Diyetetik



Mehmet Engin ADANUR
Elektrik -Elektronik Mühendisliği



Güzin CAN
Diş Hekimliği



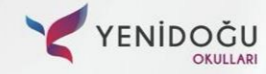
Sinan KORKUT
Hukuk



Doç. Dr. Sevgi KARAKUŞ
Eczacılık



Sevde ULUSOY
Tıp





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Fakültemizde görev yapmakta olan Doç. Dr. Sevgi Karakuş, Eczacılık Meslek Bilimleri Bölümü Farmasötik Kimya Anabilim Dalı'na Profesör olarak atanmıştır.

