

İnorganik/Metalik Nanopartiküller

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| Giriş

Nanoteknoloji biyoloji, kimya mühendislik gibi pek çok alanda kullanılan sistemlerin verimlerini artırması ve kullanıcılara yeni seçenekler sunması nedeni ile son yıllarda büyüyen ve gelişen bir teknolojidir. Günümüzde nanoteknolojinin insanlığa kazandırdığı en önemli ve umut verici etkiler nanotıp alanındadır. Kişiselleştirilmiş sağlık hizmetleri, akıllı ilaç tasarımı ve hedeflendirilmiş ilaç taşınımı, tedaviye yönelik nanotıp temelli nano-ilac taşıyıcı sistem yaklaşımlarındandır. Nanoteknoloji özellikle terapötiklerin taşınması ve kontrollü salımı için güçlü bir araçtır (1). Biyodağılım, hücre içi hedefleme, spesifik bölgelere molekül taşıma gibi konvansiyonel taşıyıcıların sınırlama getirdiği konularda limitlerin aşılmasına yardımcı olur (2). Pek çok etken maddenin, zayıf stabilite, hücre zarını geçememe ve *in vivo* olarak hızlı atılma gibi problemleri vardır. Nanomalzemelerin biyomimetik boyutu ve ayarlanabilir özellikleri, terapötiklerin vücutta taşınması için benzersiz avantajlar sağlar (3).

Nanopartiküller (NP) boyutları 1-1000 nm arasında değişen nanoteknoloji ürünleridir (4). Nanopartiküller, içine hapsedilmiş maddenin stabilitesini ve çözünürlüğünün iyileştirilmesini, membranlardan geçişin teşviğini, dolaşımda daha uzun kalmasını ve buna bağlı olarak etkinlik ve güvenliğinin artırılmasını sağlamaktadır.

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