

Special Issue

Advances in Drug Delivery: Molecular Mechanisms, Therapeutic Applications, and Technologies

Message from the Guest Editors

Driven by our growing understanding of disease mechanisms, multiple innovative drug delivery systems have been proposed to enhance drug delivery efficiency and improve treatment outcomes. Consequently, targeted delivery technologies, controlled-release systems, stimulus-responsive drug carriers, and biomimetic delivery systems have garnered significant attention in the treatment of tumors, inflammatory diseases, infections, and other conditions, paving the way for precision medication. Meanwhile, the molecular mechanisms underlying these novel drug delivery systems are being evaluated, to optimize further design and development. This Special Issue will focus on the latest advancements in drug delivery systems, particularly underlying molecular mechanisms, enabling technologies, and corresponding therapeutic applications. We welcome submissions that clarify the molecular mechanisms behind interactions between drug carriers and biological systems, introduce strategies for overcoming delivery barriers, present novel stimulus-responsive drug delivery systems, and explore theranostic platforms.

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