Special Issue

Advanced Nano-Formulations for Drug Delivery and Cancer Immunotherapy

Message from the Guest Editor

The rapid evolution of nanotechnology has revolutionized drug delivery and immunotherapy, offering unprecedented precision in targeting cancer cells while minimizing systemic toxicity. This Special Issue explores advanced nano-formulations, including polymeric nanoparticles, lipid nanoparticles, nanofibers, hydrogels, nanocomposites, liposomes, and inorganic carriers engineered to enhance drug solubility, stability, and tumor-specific accumulation. A key focus is their role in cancer immunotherapy, where nano-formulations potentiate immune checkpoint inhibitors, cancer vaccines, and adoptive cell therapies by modulating the tumor microenvironment. Contributions highlight innovations in stimuli-responsive systems, combination therapies, and personalized nanomedicine, alongside challenges in scalability, biocompatibility, and clinical translation. By bridging interdisciplinary research, this Special Issue aims to accelerate the development of next-generation nanotherapeutics for improved oncological outcomes.

Guest Editor

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