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Nota di contenuto	Overview on gene therapy -- Cationic liposome -- Functionalized peptide dendrimers -- Bioresponsive poly(amido amine)s -- Cationic polyphosphoesters -- Polysaccharide-based gene carriers -- Polypeptide-based gene carriers -- Fluorinated gene carriers -- Target gene delivery systems -- Cationic helical polypeptides -- Cyclic cationic polymers -- Cationic bolaamphiphile -- Chitosan-functionalized gene carriers -- Charge-reversal gene carriers -- Multifunctional envelope-type nanodevice -- Drug and gene co-delivery systems -- Oral delivery of gene therapy -- Gene therapy for brain diseases.
Sommario/riassunto	Gene delivery is a promising strategy for the specific treatment of numerous gene-associated human diseases by intentionally altering the gene expression in pathological cells. A successful clinical application of gene-based therapy depends on an efficient gene delivery system. Many efforts have been attempted to improve the safety and efficiency of gene-based therapies. Nanoparticles have been proved to be the most promising vehicles for clinical gene therapy due to their tunable size, shape, surface, and biological behaviors. In this volume, the recent developments of nanoparticles for clinical gene therapy will be identified and summarized.

