1. Record Nr. UNINA9910298430303321

Titolo	Gene and Cell Therapy: Biology and Applications / / edited by Giridhara R. Jayandharan
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2018
ISBN	981-13-0481-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (316 pages)
Disciplina	616.042
Soggetti	Gene therapy Stem cells Regenerative medicine Tissue engineering Biomedical engineering Medical genetics Gene Therapy Stem Cells Regenerative Medicine/Tissue Engineering Biomedical Engineering/Biotechnology Gene Function
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Retroviral vectors in gene therapy -- Chapter 2. Adeno-associated virus vectors in gene therapy -- Chapter 3. Nanoparticle-mediated gene delivery -- Chapter 4. Viral/non-viral based hybrid vectors for gene therapy -- Chapter 5. Pharmaco-gene therapy: an alternate perspective -- Chapter 6. Aptamers - Novel molecules in therapeutics -- Chapter 7. Induced pluripotent stem cells -- Chapter 8. Hope or Hype: Stem cells as therapeutics in retinal degenerative diseases -- Chapter 9. Hematopoeitic stem cells: past, present and future.
Sommario/riassunto	Recent advances in stem cell biology, nanotechnology and gene therapy have opened new avenues for therapeutics. The availability of molecular therapeutics that rely on the delivery of DNA, RNA or

proteins, harnessing enhanced delivery with nanoparticles, and the regenerative potential of stem cells (adult, embryonic or induced pluripotent stem cells) has had a tremendous impact on translational medicine. The chapters in this book cover a range of strategies for molecular and cellular therapies for human disease, their advantages, and central challenges to their widespread application. Potential solutions to these issues are also discussed in detail. Further, the book addresses numerous advances in the field of molecular therapeutics that will be of interest to the general scientific community. Lastly, the book provides specific examples of disease conditions for which these strategies have been transferred to the clinic. As such, it will be extremely useful for all students, researchers and clinicians working in the field of translational medicine and molecular therapeutics. .