

1. Record Nr.	UNINA9911019214603321
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Titolo	Biomedical Applications of Extracellular Vesicles
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2023 ©2024
ISBN	9783527842155 3527842152 9783527842131 3527842136
Edizione	[1st ed.]
Descrizione fisica	1 online resource (211 pages)
Altri autori (Persone)	LiangXing-Jie ChengKe BaiChunli LiuMinghua
Disciplina	610.28
Soggetti	Regenerative medicine Biomedical engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright -- Contents -- Preface -- Chapter 1 Extracellular Vesicles and Their Biomedical Applications: An Overview -- 1.1 Introduction -- 1.2 Biogenesis and Composition of Extracellular Vesicles -- 1.3 Biological Functions of Extracellular Vesicles -- 1.4 Extracellular Vesicles Isolation and Limitations -- Chapter 2 Biogenesis and Identification of Extracellular Vesicles -- 2.1 Biogenesis of Extracellular Vesicles -- 2.1.1 Biogenesis of Exosome -- 2.1.2 Biogenesis of Microvesicle -- 2.1.3 Biogenesis of Apoptotic Bodies -- 2.1.4 Biogenesis of Large Oncosomes -- 2.2 Identification of Extracellular Vesicles -- 2.2.1 Electron Microscopic Identification -- 2.2.1.1 Scanning Electron Microscopy -- 2.2.1.2 Transmission Electron Microscopy -- 2.2.1.3 Atomic Force Microscopy -- 2.2.1.4 CryoElectron Microscopy -- 2.2.2 Particle Size Detection -- 2.2.2.1 Nanoparticle Tracking Analysis -- 2.2.2.2 Dynamic Light Scattering -- 2.2.3 Surface Protein Assay --

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Sommario/riassunto

The book 'Biomedical Applications of Extracellular Vesicles,' edited by Zhenhua Li, Xing-Jie Liang, and Ke Cheng, explores the potential of extracellular vesicles (EVs) in various biomedical applications. It presents an in-depth overview of the biogenesis, composition, and biological functions of EVs, emphasizing their promise in diagnostics and therapeutics. The text discusses the therapeutic potential of EVs derived from diverse cell sources, including their use in regenerative medicine and the treatment of diseases such as cancer and autoimmune conditions. Additionally, the book addresses current technologies for EV production, isolation, and quality control, along with the challenges and prospects of clinical applications. This reference is intended for biomedical researchers and professionals interested in the latest advancements in EV research and applications.