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Nota di contenuto	Chapter 1. Manipulating the Matrix: Role of Extracellular Vesicles -- Chapter 2. Extracellular Matrix Remodeling in Physiological and Pathological Conditions: Insight into Extracellular Vesicles Contribution -- Chapter 3. Extracellular Matrix Modulation by Cancer-Derived Extracellular Vesicles: Impact on Cancer Malignancy -- Chapter 4. Role of Hyaluronan in Interactions of Tumor-Derived Extracellular Vesicles with Cells of Monocyte Origin -- Chapter 5. Extracellular Vesicles in Inflammation -- Chapter 6. Extracellular Vesicles in Synovial Fluid: Their role in Joint Homeostasis and Patophysiology -- Chapter 7. Extracellular Vesicles from Obese Adipose Tissue and Their Relationship with the Development of Comorbidities -- Chapter 8. Potential of Extracellular Vesicles as Therapeutics in Retinal Diseases -- Chapter 9. AFM-Based Mechanobiology of Extracellular Vesicles --

Chapter 10. Bioaffinity Recognition of Extracellular Vesicle Glycosylations -- Chapter 11. Imaging of EVs in the 3D Matrix Networks.

Sommario/riassunto

The cells in our body release a wide variety of factors into the extracellular space that help to signal, regulate and build the extracellular matrix. One of the most fascinating of these factors are extracellular vesicles (EVs). These lipid membrane-covered particles have now emerged as a new powerful method of near and distant intercellular communication. EVs facilitate communication between cells and their extracellular environment, which includes solid tissues and body fluids. This volume summarizes current knowledge on EVs as integral and active components of the extracellular matrix. It covers topics such as the interplay between EVs and ECM molecules and how cancer cells modify their microenvironment by releasing EVs. Additionally, it discusses how EVs can mediate tissue repair and regeneration by modulating matrix degradation, protein cross-linking, and matrix calcification. The book explores instances where EVs play a crucial role in conditions related to matrix biology, such as cancer and arthritis, and considers their potential as therapeutic agents for these medical conditions. Both experienced researchers and clinicians, as well as PhD students who wish to study the extracellular matrix and extracellular vesicles will find this book is an excellent introduction into the field of EV biology with applications in matrix research. The series Biology of Extracellular Matrix is published in collaboration with the American Society for Matrix Biology and the International Society for Matrix Biology.