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Titolo	Advancing Gene Fusion Detection Towards Personalized Cancer Nanodiagnostics // by Kevin M. Koo
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Descrizione fisica	1 online resource (XIII, 102 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	610.28
Soggetti	Biomedical engineering Nanotechnology Cancer research Biomedical Engineering/Biotechnology Biomedical Engineering and Bioengineering Cancer Research
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Nota di contenuto	Unifying Next-Generation Biomarkers and Nanodiagnostic Platforms for Precision Prostate Cancer (PCa) Management -- Colorimetric Gene Fusion Diagnostics for Visual Binary Readout -- Label -Free Surface-Enhanced Raman Scattering Detection System for Clinical Biomarker Targets -- Amplification-Free Electrochemical RNA Biomarker Sensing -- Simultaneous Analysis of Multiple Biomarkers via High-Throughput Parallel Profiling.
Sommario/riassunto	This book presents a unique concept of merging nanotechnology and novel urinary biomarkers for accurate early prostate cancer detection, discussing an entire progressive pipeline of innovative new strategies in biosensor development, from a simple colorimetric system to a complex system for simultaneous multiple biomarker sensing. For newcomers to the field of nucleic acid biosensing, it also describes various isothermal amplification and amplification-free strategies, which are currently the main research areas. Lastly, the book introduces and demonstrates the notion of clinical nanobiosensor

validation toward clinical translation: the ultimate aim of researchers in the biosensor field. This book is a valuable reference resource learners seeking inspiration for cancer biosensor development.
