

1.	Record Nr.	UNINA9910138418103321
	Titolo	Grid Computing : Technology and Applications, Widespread Coverage and New Horizons // edited by Soha Maad
	Pubbl/distr/stampa	Rijeka, Croatia : , : InTech, , 2012
	ISBN	953-51-5617-9
	Descrizione fisica	1 online resource (368 pages) : illustrations
	Disciplina	004.2
	Soggetti	Computer architecture
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references.
2.	Record Nr.	UNINA9910893118803321
	Titolo	Elixir : international journal
	Pubbl/distr/stampa	[S.l.], 2011-
	ISSN	2229-712X
	Descrizione fisica	Online-Ressource
	Disciplina	300 700 500 600
	Soggetti	Zeitschrift
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Periodico
	Note generali	Gesehen am 03.11.20

3. Record Nr.	UNINA9910733712203321
Titolo	Microfluidics and Biosensors in Cancer Research : Applications in Cancer Modeling and Theranostics / / edited by David Caballero, Subhas C. Kundu, Rui L. Reis
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-04039-2
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (598 pages) : illustrations
Collana	Advances in Experimental Medicine and Biology, , 2214-8019 ; ; 1379
Disciplina	610.28 616.99400285
Soggetti	Cancer Biochemical markers Microfluidics Pharmacology Cancer - Treatment Cancer Biology Biomarkers Cancer Therapy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part 1. Fundamentals of Microfluidics and Biosensors -- Chapter 1. Fundamentals of Biosensors and Detection Methods -- Chapter 2. How to Get Away with Gradients -- Chapter 3. Sensors and Biosensors in Organs-on-a-chip Platforms -- Chapter 4. Current Trends in Microfluidics and Biosensors for Cancer Research Applications -- Part 2. Modelling the Tumor Microenvironment and Its Dynamic Events -- Chapter 5. The Tumor Microenvironment — an Introduction for the Development of Microfluidic Devices -- Chapter 6. Biomaterials for Mimicking and Modelling Tumor Micro-environment -- Chapter 7. Advancing Tumor Microenvironment Research by Combining Organs-on-chips and Biosensors -- Chapter 8. Microfluidic-driven Biofabrication and the Engineering of Cancer-like Microenvironments -- Chapter 9. Advances in 3d Vascularized Tumor-on-a-chip

Technology -- Part 3. Cancer Detection and Diagnosis -- Chapter 10. Biosensors Advances: Contributions to Cancer Diagnostics and Treatment -- Chapter 11. Flexible Sensing Systems for Cancer Diagnostics -- Chapter 12. Coupling Micro-physiological Systems and Biosensors for Improving Cancer Biomarkers Detection -- Chapter 13. Microfluidic Biosensor-based Devices for Rapid Diagnosis and Effective Anti-cancer Therapeutic Monitoring for Breast Cancer Metastasis -- Chapter 14. Liquid Biopsies: Flowing Biomarkers -- Chapter 15. From Exosomes to Circulating Tumor Cells: Using Microfluidics to Detect High Predictive Cancer Biomarkers -- Chapter 16. Microfluidics for the Isolation and Detection of Circulating Tumor Cells -- Chapter 17. Evolution in Automatized Detection of Cancer Cells: Advances in Magnetic Microcytometers -- Chapter 18. Droplet-based Microfluidic Chip Design, Fabrication and Use for Ultrahigh-throughput DNA Analysis and Quantification -- Chapter 19. Emerging Microfluidic and Biosensor Technologies for Improved Cancer Theranostics -- Part 4. Clinical Applications: Towards Personalized Medicine -- Chapter 20. Microfluidics for Cancer Biomarker Discovery, Research and Clinical Application -- Chapter 21. Methods for the Detection of Circulating Biomarkers in Cancer Patients -- Chapter 22. Advances in Microfluidics for the Implementation of Liquid Biopsy in Clinical Routine.

---

### Sommario/riassunto

This book offers a comprehensive overview of the development and application of microfluidics and biosensors in cancer research, in particular, their applications in cancer modeling and theranostics. Over the last decades, considerable effort has been made to develop new technologies to improve the diagnosis and treatment of cancer. Microfluidics has proven to be a powerful tool for manipulating biological fluids with high precision and efficiency and has already been adopted by the pharmaceutical and biotechnology industries. With recent technological advances, particularly biosensors, microfluidic devices have increased their usefulness and importance in oncology and cancer research. The aim of this book is to bring together in a single volume all the knowledge and expertise required for the development and application of microfluidic systems and biosensors in cancer modeling and theranostics. It begins with a detailed introduction to the fundamental aspects of tumor biology, cancer biomarkers, biosensors and microfluidics. With this knowledge in mind, the following sections highlight important advances in developing and applying biosensors and microfluidic devices in cancer research at universities and in the industry. Strategies for identifying and evaluating potent disease biomarkers and developing biosensors and microfluidic devices for their detection are discussed in detail. Finally, the transfer of these technologies into the clinical environment for the diagnosis and treatment of cancer patients will be highlighted. By combining the recent advances made in the development and application of microfluidics and biosensors in cancer research in academia and clinics, this book will be useful literature for readers from a variety of backgrounds. It offers new visions of how this technology can influence daily life in hospitals and companies, improving research methodologies and the prognosis of cancer patients.

---