

1. Record Nr.	UNINA9910483311503321
Titolo	Immunodiagnostic technologies from laboratory to point-of-care testing // Pankaj Suman, Pranjali Chandra, editors
Pubbl/distr/stampa	Singapore : , : Springer, , [2021] ©2021
ISBN	981-15-5823-X
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (VIII, 245 p. 64 illus., 60 illus. in color.)
Disciplina	616.0756
Soggetti	Immunodiagnosis Biomedical engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Timeline of the evolution of immunodiagnostics -- Chapter 2. Receptors in immunodiagnostics: Antibody and their derivatives -- Chapter 3. Engineering antibodies for biointerfacing -- Chapter 4. Alternative analyte-binding compounds for immunosensor applications -- Chapter 5. Principles and applications of immunodiagnostics using radioisotopes as tracers -- Chapter 6. Advancements and application of optical detection system in development of optical sensors -- Chapter 7. Miniaturized technologies in immunodiagnostics -- Chapter 8. Prospects of Point of care diagnostics for medical applications -- Chapter 9. Potential and advancements in nanomaterial for diagnostic applications -- Chapter 10. Photoelectrochemical immunosensor in clinical diagnosis -- Chapter 11. Multiplexing in immunodiagnosis -- Chapter 12. Biosensors for clinical samples: Consideration and approaches -- Chapter 13. Application of immunodiagnostics in diagnosis of animal diseases -- Chapter 14. Changing trends in medical diagnosis and health monitoring with advancements in immunosensing technologies -- Chapter 15. Future perspective of immunodiagnostics in clinical applications -- Chapter 16. Commercial aspects of immunoassays and immunoassays: Short-term and future aspects.
Sommario/riassunto	This book presents the timeline of immunodiagnostics evolution, including advancements in immunological/nucleic acid probes, assay

design, labelling techniques, and devices for signal transduction and acquisition. In the past few years, enzyme and nanocatalyst-based immune assays have undergone numerous modifications to enhance their sensitivity and potential for automation. Further, to reduce production costs and the use of laboratory animals, engineering small antibodies and nucleic acid probes (aptamers) has become increasingly popular in the development of novel and powerful bioassays. In light of the notable advancements in immunodiagnostics, this book highlights the combined efforts of clinicians, biotechnologists, material scientists, nanotechnologists and basic scientists in a coherent and highly structured way. The book takes readers on the journey of immunodiagnostic technologies, from their introduction to the present.
