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Autore	Gupta Varsha
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Soggetti	Environmental engineering Biotechnology Microbial genetics Microbial genomics Cell culture Regenerative medicine Tissue engineering Environmental Engineering/Biotechnology Microbial Genetics and Genomics Cell Culture Regenerative Medicine/Tissue Engineering
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1. An introduction to Biotechnology -- 2. Fundamentals of Recombinant DNA Technology -- 3. Animal Cell Culture and Cryopreservation -- 4. Production of Recombinant Pharmaceutical Proteins -- 5. Transgenic Animals and Plants -- 6. Genome Sequencing -- 7. Pharmacogenomics and Pharmacogenetics -- 8. Immunology and Medical Microbiology -- 9. Molecular Diagnostics. - 10. Diagnosis of specific diseases -- 11. Molecular therapeutics -- 12. Rational Drug Designing -- 13. Drug Targeting and Delivery -- 14. Vaccines -- 15. Embryo Transfer Technology -- 16. Stem Cell Biology and its Clinical Application -- 17. Gene Therapy -- 18. Forensic Medicine -- 19.

Environmental Biotechnology -- 20. Plant Biotechnology and Agriculture -- 21. Tissue engineering and Artificial Organ -- 22. Life Style, Stress and Disorders -- 23. Intellectual Property Rights -- 24. Biosafety and Bioethics. <

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Sommario/riassunto

This book explores the journey of biotechnology, searching for new avenues and noting the impressive accomplishments to date. It has harmonious blend of facts, applications and new ideas. Fast-paced biotechnologies are broadly applied and are being continuously explored in areas like the environmental, industrial, agricultural and medical sciences. The sequencing of the human genome has opened new therapeutic opportunities and enriched the field of medical biotechnology while analysis of biomolecules using proteomics and microarray technologies along with the simultaneous discovery and development of new modes of detection are paving the way for ever-faster and more reliable diagnostic methods. Life-saving biopharmaceuticals are being churned out at an amazing rate, and the unraveling of biological processes has facilitated drug designing and discovery processes. Advances in regenerative medical technologies (stem cell therapy, tissue engineering, and gene therapy) look extremely promising, transcending the limitations of all existing fields and opening new dimensions for characterizing and combating diseases.

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