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Nota di contenuto	Molecular Biotechnology -- Biophysical and biochemical analysis of recombinant proteins -- Production and downstream processing of biotech products -- Formulation of biotech products, including biopharmaceutical considerations -- Pharmacokinetics and pharmacodynamics of peptide and protein drugs -- Immunogenicity of pharmaceutical proteins -- General considerations of monoclonal antibodies from structure to therapeutic application -- Genomics, Other “Omics” Technologies, Personalized Medicine and Additional Biotechnology-Related Techniques -- Dispensing biotechnology products: handling, professional education and product information --

Economic considerations in medical biotechnology -- Regulatory framework for biosimilars -- Vaccines -- Oligonucleotides and siRNA -- Gene therapy -- Stem cell technology -- Therapeutic Applications.- Endocrinology -- Insulin -- Follicle-stimulating hormone -- Growth hormone -- Cardiovascular and Respiratory Applications -- Recombinant coagulation factors and thrombolytics -- Recombinant human deoxyribonuclease -- Oncology -- Monoclonal antibodies in oncology -- Hematopoetic growth factors -- Inflammation and Immunemodulation -- Monoclonal antibodies in transplantation -- Monoclonal antibodies and antibody-based therapeutics in anti-inflammatory therapy -- Interferons and interleukins -- Anti-infectious diseases -- Monoclonal antibodies -- Enzyme replacement therapy.

Sommario/riassunto

This introductory text explains both the basic science, production, quality, dosage forms, administration, economic and regulatory aspects and the clinical applications of biotechnology-derived pharmaceuticals. It serves as a complete one-stop source for undergraduate/graduate pharmacists and pharmaceutical science students. An additional important audience are pharmaceutical scientists in industry and academia, particularly those who have not received formal training in pharmaceutical biotechnology and are inexperienced in this field. The rapid growth and advances in the field made it necessary to revise this textbook in order to continue providing up-to-date information and introduce readers to cutting edge knowledge and technology of this field. This Sixth Edition completely updates the previous edition and includes additional coverage on new approaches such as oligonucleotides, siRNA, mRNA, gene therapy, cell therapies, monoclonal antibodies and vaccines. With more than 3-million-chapter downloads, the fifth edition of the textbook has achieved widespread distribution as a key educational resource for the field of pharmaceutical biotechnology.