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Sommario/riassunto	Tailoring of biomolecules using protein engineering technology, and host cells culture techniques are among the most sophisticated and elegant achievements of modern applied life sciences in which the basic fundamentals biotechnology are applicable for the development and manufacturing of biologics and other related bio-molecules for a hurdle free life with good health. A majority of biologics derived from genetically modified host cells in the current market are bio-formulation such as antibodies, nucleic acid products and vaccines. Such bio-formulations are developed mainly in two steps i.e. upstream process and downstream process. The first volume of this series begins with the latest information on how the classical stepwise host cells culture (mammals, animals, plants, and bacteria) methodology has

been changed to fully continuous or partially continuous host cells culture process in order to economise the biopharmaceutical products manufacturing process. In addition this volume narrates a brief history on conceptual development of new thoughts in designing biotechnology industries for commercial production of variety of therapeutic proteins with structural modification on the basis of clinical requirements. The readers will feel excited by going through the latest discovery and development in applied life sciences for designing innovative biomolecules for health care with utmost safe. The most interesting part of this volume is newly developed concept on bioprinting. It explains how to design and fabricate animate objects by fusing or depositing material of interest in the form of powders, solid dusts, metal, liquid or even living cells or tissues by layers to produce 3D objectives. The first volume ends with the latest information on the current trend in biologics market, market dynamic, drives, and opportunities with challenges.
