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Autore	Portner Ralf
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Nota di contenuto	Biopharmaceuticals Produced from Cultivated Mammalian Cells -- Remote Control of Mammalian Therapeutic Designer Cells -- Next generation cell engineering using microRNAs -- An Omic’s data-driven approach towards engineering mammalian cell factories and bioprocesses for biopharmaceutical production -- Redesigning spent media from cell culture bioprocess to feed new bacterial fermentations -- Monoclonal antibody glycoengineering for biopharmaceutical quality

assurance -- Next-generation cell engineering platform for improving recombinant protein production in mammalian cells -- Manufacturing human pluripotent stem cells and differentiated progenitors -- Biomanufacturing of Mesenchymal Stromal Cell for Therapeutic Applications -- Process Design for hMSC Products in Stirred Tank Bioreactors -- Bio-production of Adeno-associated virus for gene therapy -- Scale-up (and scale-down) of CHO cell culture, with a focus on how to adjust the various culture parameters/setpoints across different systems from lab-scale to manufacturing-scale -- Intensified and Continuous mAb Production with Single-Use Systems -- Mathematical modelling of cell culture processes -- Model-assisted design concepts for mammalian cell culture processes -- Bioprocess monitoring and control -- Industrial Monitoring of Cell Culture.

Sommario/riassunto

This contributed volume is dedicated towards the progress achieved within the last years in all areas of Cell Culture Engineering and Technology. It comprises contributions of active researchers in the field of cell culture development for the production of recombinant proteins, cell line development, cell therapy and gene therapy, with consideration of media development, process scale-up, reactor design, monitoring and control and model-assisted strategies for process design. The knowledge and expertise of the authors cover disciplines like cell biology, engineering, biotechnology and biomedical sciences. This book is conceived for graduate students, postdoctoral fellows and researchers interested in the latest developments in Cell Engineering.