

1. Record Nr.	UNINA9910142971803321
Titolo	Emerging technology platforms for stem cells [[electronic resource] /] / edited by Uma Lakshmipathy, Jonathan D. Chesnut, Bhaskar Thyagarajan
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, c2009
ISBN	1-282-11371-2 9786612113710 0-470-45492-X 0-470-45491-1
Descrizione fisica	1 online resource (550 p.)
Altri autori (Persone)	ChesnutJonathan D ThyagarajanBhaskar LakshmipathyUma
Disciplina	616.02774 616/.02774
Soggetti	Stem cells - Therapeutic use Animal cell biotechnology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	EMERGING TECHNOLOGY PLATFORMS FOR STEM CELLS; CONTENTS; Foreword; Preface; Contributors; PART I; 1 Derivation Methods for Human Embryonic Stem Cells: Past, Present, and Future; 2 Isolation of Human Embryonic Stem Cells from Various Stages of the Human Embryo; 3 Derivation of Stem Cells from Epiblasts; 4 Derivation of Embryonic Stem Cells from Parthenogenetic Eggs; 5 Reprogramming Developmental Potential; PART II; 6 Adult Stem Cells and Their Role in Endogenous Tissue Repair; 7 Greater Differentiation Potential of Adult Stem Cells; 8 Cancer Stem Cells 9 Large-Scale Production of Adult Stem Cells for Clinical UsePART III; 10 Genetic and Epigenetic Features of Stem Cells; 11 Directed Differentiation of Embryonic Stem cells; 12 Identification of Signaling Pathways Involved During Differentiation; PART IV; 13 Media and Extra Cellular Matrix Requirements for Large-Scale ESC Growth; 14

Automated Method for Embryonic Stem Cell Culture; 15 Quantitative 2D Imaging of Human Embryonic Stem Cells; 16 Nanobiotechnology for Stem Cell Culture and Maintenance; 17 Engineering Microenvironments to Control Stem Cell Functions; PART V
18 Improved Lentiviral Gene Delivery Tools for Stem Cells; 19 Sleeping Beauty-Mediated Transposition in Stem Cells; 20 PhiC31 Integrase for Modification of Stem Cells; 21 Cell Engineering Using Integrase and Recombinase Systems; PART VI; 22 Human Embryonic Stem Cell-Derived Cardiomyocytes for Cell Therapy and Drug Discovery; 23 Human Embryonic Stem Cells in Drug Discovery; 24 Characterization and Culturing of Adipose-Derived Precursor Cells; 25 Bringing Mesenchymal Stem Cells into the Clinic; Index

Sommario/riassunto

This book focuses on practical applications for using adult and embryonic stem cells in the pharmaceutical development process. It emphasizes new technologies to help overcome the bottlenecks in developing stem cells as therapeutic agents. A key reference for professionals working in stem cell science, it presents the general principles and methodologies in stem cell research and covers topics such as derivitization and characterization of stem cells, stem cell culture and maintenance, stem cell engineering, applications of high-throughput screening, and stem cell genetic modification with the
