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Titolo	Stem cells : from basic research to therapy // editors, Federico Calegari, DFG-Center and Cluster of Excellence for Regenerative Therapies, Dresden University of Technology, C/o Max Planck Institute of Molecular Cell Biology and Genetics, Dresden
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Collana	Stem Cells
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Front Cover; Preface; Contents; Gene Nomenclature; The History of Stem Cells; Part I: Basic Stem Cell Biology; Chapter 1: Cell Cycle Regulation of Pluripotent Stem Cells; Chapter 2: Asymmetric Cell Divisions and Nuclear Migrations of Neural Progenitors: Two Mechanisms that Influence Neurogenesis; Chapter 3: Epigenetic Regulation of Adult Stem Cells; Chapter 4: Hematopoietic Stem Cell Aging and Oxidative Stress; Chapter 5: Bioelectric Controls of Stem Cell Function; Part II: Tissue Formation During Development Chapter 6: Development from the Fertilized Egg to the Three Germ Layers and its Relevance to Signaling and Lineage Commitment of Embryonic Stem CellsChapter 7: Hematopoiesis During Embryonic Development; Chapter 8: Neural Progenitors and Evolution of Mammalian Neocortex; Chapter 9: Dynamic Gene Networks in Neural Stem Cell Regulation; Chapter 10: Stem Cells in the Development, Regeneration and Repair of the Retina; Chapter 11: Progenitor Cells in Embryonic and Adult Lungs; Chapter 12: Stem Cells During Tooth Development

Chapter 13: Liver and Pancreas: Mechanisms of Development and Size Control; Part III: Model Organisms; Chapter 14: Developmental Regulation and De Novo Formation of Stem Cells in Plants; Chapter 15: Planarian Totipotent Stem Cells; Chapter 16: Zebrafish in Stem Cell Research; Chapter 17: Deer Antler Stem Cells-New Aspects and Findings; Chapter 18: Genetic Manipulations of Pluripotent Stem Cells; About the Authors; Color Plate Section

Sommario/riassunto

Preface: the first volume of Stem cells deals with the fundamental principles that govern embryonic and somatic stem cell biology. Historically, the identification and characterization of such pathways and general rules of stemness occurred during embryonic development and volume I reflects this with topics spanning from cell cycle regulation, epigenetics, and asymmetric cell division in a number of organ systems from planarian to human. Three specific sections will discuss (i) Basic stem cell biology, (ii) Tissue formation during development, and (iii) Model organisms with particular emphasis on those more relevant for biomedical research and, thus, leading to the topics addressed in volume II--Provided by publisher.
