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Nota di contenuto	Front Cover; Stem Cells: Scientific Facts and Fiction; Copyright Page; Contents; Preface; Acknowledgements; 1 The Biology of the Cell; 1.1 Organisms' Composition; 1.2 Deoxyribonucleic Acid, Genes, and Chromosomes; 1.3 How the Amount of Messenger Ribonucleic Acid is Regulated; 1.4 From Messenger Ribonucleic Acid to a Functional Protein; 1.5 From Deoxyribonucleic Acid and Proteins to a Cell with a Specific Function; 1.5.1 Epigenetic Regulation; 1.5.2 Ribonucleic Acid Interference; 1.6 Deoxyribonucleic Acid Differences Between Genomes; 1.7 Diseases Due to Variations and Genome Mutations 1.8 Dominant or Recessive1.9 Deoxyribonucleic Acid Outside the Nucleus: Bacterial Remains; 1.10 Cell Lines and Cell Culture; 2 Embryonic Development; 2.1 Fertilization and Early Embryo Development; 2.2 Sex Cells and Germ Cell Tumors; 3 What Are Stem Cells?; 3.1 What are the Properties of Stem Cells That Make Them Different from Other Cells?; 3.2 Totipotency and Pluripotency, and Embryonic Stem Cells; 3.3 Multipotency, Unipotency, and Adult Stem Cells; 3.4 Cell Division and Aging: The Role of Telomerase; 3.5 The Relationship Between Cell Division and Differentiation: Epigenetics 3.6 Epigenetics in Stem Cells4 Of Mice and Men: The History of Embryonic Stem Cells; 4.1 How it All Began: Pluripotent Cells in Early Embryos; 4.2 Mouse Embryonal Carcinoma Cell Lines; 4.3 Pluripotent Cells in an Early Embryo; 4.4 Mouse Embryonic Stem Cell Lines; 4.5 Toward Human Embryonic Stem Cells; 4.6 On the Road to Stem Cell

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Sommario/riassunto	The second edition of Stem Cells: Scientific Facts and Fiction provides the non-stem cell expert with an understandable review of the history, current state of affairs, and facts and fiction of the promises of stem cells. Building on success of its award-winning preceding edition, the second edition features new chapters on embryonic and iPS cells and stem cells in veterinary science and medicine. It contains major revisions on cancer stem cells to include new culture models, additional interviews with leaders in progenitor cells, engineered eye tissue, and xeno organs from stem cell