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Nota di contenuto	Part 1: Overview And Introduction -- 1 Overview of Stem Cells and Their Applications in Veterinary Medicine -- 2 Introduction to Mammary Gland and its Cell Types -- 3 Mammary Stem Cells: How Much Do We Know? -- 4 Methods of Identification and Characterization of Stem Cells -- 5 Potential of Stem Cell Therapy to Combat Mastitis in Dairy Animals -- PART 2: STEM CELLS AND VETERINARY RESEARCH -- 6 Fatty Liver Disease and Utility of Stem Cells in Developing the Disease Model -- 7 Mammary Epithelial Cells: A Potential Cellular Model to Understand the Impact of Heat Stress on Mammary Gland and Milk Production in Dairy Animals -- 8 Milk and Milk-Derived Stem Cells -- 9 Cryopreservation of Testicular Stem Cells and its Application in Veterinary Science -- 10 Testicular Stem Cell Niche -- 11 Proteomics of Mammary Cell Lines and Mammary Stem Cells -- PART 3: THERAPEUTIC APPLICATIONS -- 12 Advancing Quantitative Stem Cell Dosing for Veterinary Stem Cell Medicine.-13 Mesenchymal Stem Cells: a novel therapy for the treatment of Bovine Mastitis -- 14 Therapeutic Applications of Mesenchymal Stem Cells in Canine Diseases -- 15

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Sommario/riassunto

This book explores the potential applications of animal stem cells in veterinary medicine. It begins with an overview of stem cells and their application in treating various animal diseases, including mastitis. In turn, the book discusses the challenges of using stem cells in regenerative medicine and emphasizes the importance of understanding the action of stem cells and preclinical evidence for ensuring safety and therapeutic efficacy. It also presents methods for the identification, characterization, and quantification of stem cells. Further, it discusses the therapeutic applications of different stem cells, including milk-derived, testicular, and mesenchymal stem cells in veterinary medicine. Lastly, it discusses strategies for and therapeutic applications of genome editing by CRISPER/Cas9 in mammary stem cells. As such, the book offers a valuable resource for students and scientists working in the veterinary sciences and veterinarians.