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Titolo	Hematopoietic Stem Cells : Keystone of Tissue Development and Regenerative Medicine / / edited by Meng Zhao, Pengxu Qian
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Collana	Advances in Experimental Medicine and Biology, , 2214-8019 ; ; 1442
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Nota di contenuto	Chapter 1. Hematopoietic Stem Cell Development in Mammalian Embryos -- Chapter 2. Hematopoietic Stem Cells and Their Bone Marrow Niches -- Chapter 3. Emerging Roles of Epigenetic Regulators in Maintaining Hematopoietic Stem Cell Homeostasis -- Chapter 4. Metabolism in Hematopoiesis and Its Malignancy -- Chapter 5. The Origin of Clonal Hematopoiesis and Its Implication in Human Diseases -- Chapter 6. Ex vivo Expansion and Homing of Human Cord Blood Hematopoietic Stem Cells -- Chapter 7. N6-methyladenosine RNA Modification in Normal and Malignant Hematopoiesis -- Chapter 8. Immune System Influence on Hematopoietic Stem Cells and Leukemia Development -- Chapter 9. Learning from Zebrafish Hematopoiesis -- Chapter 10. Multi-lineage Differentiation from Hematopoietic Stem Cells -- Chapter 11. Gene Editing in Hematopoietic Stem Cells -- Chapter 12. Aging, Causes and Rejuvenation of Hematopoietic Stem Cells.
Sommario/riassunto	This book renders a comprehensive understanding of hematopoietic stem cells (HSCs) from their embryonic development through adult

maintenance to aging, in the studies conducted in zebrafish and mammals. Hematopoiesis provides a paradigm for understanding the development, maintenance, regeneration, aging and malignant transformation of mammalian organs. Sitting at the apex of the hematopoiesis hierarchy tree, HSCs orchestrate their proliferation, self-renewal, and differentiation to produce all the blood cell lineages throughout life, which represents the best example for somatic stem cell studies. In this book, key regulatory mechanisms for HSC self-renewal and differentiation are overviewed in an array of fields including epigenetics, metabolism and microenvironment regulation. It also highlights the HSC heterogeneity and clonal dynamics from the recent advanced single-cell technologies. This book elaborates on the research history of HSC studies and reveals how the insights from HSC studies shed light on their clinic application. It presents great value from the bench to the clinic.