

Table of Contents

Preface	VII
Chapter 1 Introduction to Stem Cell	1
a. Stem Cell	1
b. Stem-cell Line	11
c. Stem-cell Niche	14
Chapter 2 Types of Stem Cells	25
a. Embryonic Stem Cell	25
b. Adult Stem Cell	45
c. Cancer Stem Cell	51
d. Induced Pluripotent Stem Cell	62
e. Induced Stem Cells	76
f. Progenitor Cell	101
g. Hematopoietic Stem Cell	104
h. Mesenchymal Stem Cell	112
i. Amniotic Stem Cells	117
j. Dental Pulp Stem Cells	120
k. Neural Stem Cell	122
l. Neuroepithelial Cell	127
Chapter 3 Stem Cell Therapy	134
a. Stem-cell Therapy	134
b. Hematopoietic Stem Cell Transplantation	149
c. Human Embryonic Stem Cells Clinical Trials	161
Chapter 4 Bone Marrow: An Integrated Study	165
a. Bone Marrow	165
b. Endothelial Stem Cell	171
c. Bone Marrow Examination	176
Chapter 5 Significant Aspects of Stem Cell	180
a. Cell Potency	180
b. Cellular Differentiation	183
c. Epigenetics in Stem-cell Differentiation	192
d. Stem Cell Laws	198
Permissions	
Index	