

# CONTENTS

<b>Preface</b>	<b>vii</b>
<b>Contributors</b>	<b>ix</b>
<b>1 Stem Cell Systems: Basic Principles and Methodologies</b> <i>Susan K. Nilsson and Peter J. Quesenberry</i>	<b>1</b>
<b>2 Cytokine/Growth Factor Responsiveness of Early Hemopoietic Progenitor Cells</b> <i>Antony W. Burgess</i>	<b>15</b>
<b>3 Molecular Mechanisms Controlling the Cell Cycle and Proliferation-Differentiation Interrelationships</b> <i>Gary S. Stein, André J. Van Wijnen, Dennet R. Hushka, Baruch Frenkel, Jane B. Lian, and Janet L. Stein</i>	<b>41</b>
<b>4 Stem Cell Transcription</b> <i>Sherman M. Weissman and Archibald S. Perkins</i>	<b>81</b>
<b>5 Hematopoietic Stem Cells: Proliferation, Purification and Clinical Applications</b> <i>Ruth Pettengell and Malcolm A. S. Moore</i>	<b>133</b>
<b>6 Delivery Systems for Gene Therapy: The Adenovirus</b> <i>Thomas Shenk</i>	<b>161</b>
<b>7 Gene Transfer to Muscle and Spinal Cord Using Herpes Simplex Virus-Based Vectors</b> <i>Johnny Huard, William F. Goins, Giridhar R. Akkaraju, David Krisky, Tom Oligino, Peggy Marconi, Charles S. Day, and Joseph C. Glorioso</i>	<b>179</b>

<b>8</b>	<b>Herpes Virus Vectors</b>	<b>201</b>
	<i>Xandra O. Breakefield, Peter Pechan, Karen Johnston, and David Jacoby</i>	
<b>9</b>	<b>Delivery Systems for Gene Therapy: Adeno-Associated Virus</b>	<b>235</b>
	<i>Gabriele Kroner-Lux, Christopher E. Walsh, and Richard Jude Samulski</i>	
<b>10</b>	<b>Delivery Systems for Gene Therapy: Adeno-Associated Virus 2</b>	<b>257</b>
	<i>Arun Srivastava</i>	
<b>11</b>	<b>Ribozyme Gene Therapy Targeting Stem Cells for Human Immunodeficiency Virus Infection</b>	<b>289</b>
	<i>Anthony D. Ho, Ping Law, Xinqiang Li, and Flossie Wong-Staal</i>	
<b>12</b>	<b>Elements of DNA Vaccine Design</b>	<b>309</b>
	<i>Michael J. Caufield and Margaret A. Liu</i>	
<b>13</b>	<b>Development of Gene Therapy for Gaucher Disease</b>	<b>331</b>
	<i>J.A. Barranger, E.O. Rice, J. Dunigan, M. Eljanne, N. Takiyama, M. Nimgaonkar, J. Mierski, M. Beeler, A. Kemp, J. Lancia, S. Lucot, S. Schierer-Fochler, J. Mannion-Henderson, T. Mohney, W. Swaney, A. Bahnson, V. Bansal, and E. Ball</i>	
<b>14</b>	<b>Clinical Applications of Gene Therapy: Correction of Genetic Disease Affecting Hematopoietic Cells</b>	<b>363</b>
	<i>Jeffrey A. Medin, Johan Richter, and Stefan Karlsson</i>	
<b>15</b>	<b>Gene Therapy for Hemophilia</b>	<b>385</b>
	<i>Katherine A. High</i>	
<b>16</b>	<b>Clinical Applications of Gene Therapy: Anemias</b>	<b>411</b>
	<i>George F. Atweh and Bernard G. Forget</i>	
<b>17</b>	<b>Clinical Applications of Gene Therapy in Cancer: Modification of Sensitivity to Therapeutic Agents</b>	<b>429</b>
	<i>Thomas Licht, Michael M. Gottesman, and Ira Pastan</i>	
<b>18</b>	<b>Clinical Applications of Gene Therapy: Brain Tumors</b>	<b>455</b>
	<i>Kenneth W. Culver and John C. Van Gilder</i>	
<b>19</b>	<b>Clinical Applications of Gene Therapy: Cardiovascular Disease</b>	<b>471</b>
	<i>Jonathan C. Fox</i>	
<b>20</b>	<b>Applications of Gene Therapy to Neurological Diseases and Injuries</b>	<b>503</b>
	<i>Derek L. Choi-Lundberg and Martha C. Bohn</i>	
	<b>Index</b>	<b>555</b>