

# CONTENTS

<b>Contributors</b>	<b>vii</b>
<b>Preface</b>	<b>ix</b>
<b>1 General Principles of Toxicology</b> <i>Robert C. James, Stephen M. Roberts, and Phillip L. Williams</i>	<b>1</b>
<b>2 Xenobiotic Absorption, Distribution, Metabolism, and Excretion</b> <i>Michael R. Franklin</i>	<b>29</b>
<b>3 Toxicokinetics</b> <i>Rebecca A. Clewell and Harvey J. Clewell III</i>	<b>59</b>
<b>4 Omics Technologies in Toxicology</b> <i>Mary Jane Cunningham</i>	<b>89</b>
<b>5 Toxicity of the Hematopoietic System</b> <i>Sherilyn A. Gross</i>	<b>103</b>
<b>6 Hepatotoxicity: Toxic Effects on the Liver</b> <i>Robert C. James and Stephen M. Roberts</i>	<b>125</b>
<b>7 Nephrotoxicity: Toxic Responses of the Kidney</b> <i>Lawrence H. Lash</i>	<b>139</b>
<b>8 Neurotoxicity: Toxic Effects on the Nervous System</b> <i>William M. Caudle and Gary W. Miller</i>	<b>157</b>
<b>9 Dermatotoxicity: Toxic Effects on the Skin</b> <i>Sailesh Konda and Howard I. Maibach</i>	<b>169</b>
<b>10 Pulmonotoxicity: Toxic Effects in the Lung</b> <i>Cuiqing Liu and Qinghua Sun</i>	<b>179</b>

<b>11</b>	<b>Immunotoxicity: Toxic Effects on the Immune System</b>	<b>197</b>
	<i>Eric S. Sobel and Stephen M. Roberts</i>	
<b>12</b>	<b>Toxic Effects on Reproduction</b>	<b>211</b>
	<i>Mary L. Hixon</i>	
<b>13</b>	<b>Developmental Toxicology</b>	<b>223</b>
	<i>Vincent F. Garry and Peter L. Truran</i>	
<b>14</b>	<b>Mutagenesis and Genetic Toxicology</b>	<b>235</b>
	<i>Martha M. Moore, Meagan B. Myers, and Robert H. Heflich</i>	
<b>15</b>	<b>Chemical Carcinogenesis</b>	<b>259</b>
	<i>James E. Klaunig</i>	
<b>16</b>	<b>Properties and Effects of Metals</b>	<b>283</b>
	<i>David B. Mayfield, Ari S. Lewis, Lisa A. Bailey, and Barbara D. Beck</i>	
<b>17</b>	<b>Properties and Effects of Pesticides</b>	<b>309</b>
	<i>Janice Britt</i>	
<b>18</b>	<b>Properties and Effects of Solvents and Solvent-Like Chemicals</b>	<b>325</b>
	<i>Christopher M. Teaf, Michele M. Garber, and J. Michael Kuperberg</i>	
<b>19</b>	<b>Nanotoxicology</b>	<b>359</b>
	<i>Hongbo Ma, Steve Diamond, Georgia Hinkley, and Stephen M. Roberts</i>	
<b>20</b>	<b>Computational Toxicology</b>	<b>373</b>
	<i>Richard S. Judson, David M. Reif, and Keith A. Houck</i>	
<b>21</b>	<b>Epidemiological Issues in Occupational and Environmental Health</b>	<b>391</b>
	<i>Michael S. Bloom and John E. Vena</i>	
<b>22</b>	<b>Occupational and Environmental Health</b>	<b>411</b>
	<i>Brenda S. Buikema, T. Renée Anthony, and Fredric Gerr</i>	
<b>23</b>	<b>Human Health Risk Assessment</b>	<b>425</b>
	<i>Leah D. Stuchal, Robert C. James, and Stephen M. Roberts</i>	
	<b>Glossary</b>	<b>457</b>
	<b>Index</b>	<b>471</b>