
Contents

<i>Preface</i>	<i>vii</i>
<i>Acknowledgement</i>	<i>ix</i>

Section 1: Perinatal Therapeutics

1. Preterm Therapeutics	3
2. Neuroprotective Perinatal Therapeutics.....	8
3. Teratogenic Medications and Therapeutics to Prevent Fetal Anomalies	11
4. Perinatal Psychotropic Therapeutics	13
5. Perinatal Antidiabetic Therapeutics.....	15
6. Neonatal Cardiotoxic Therapeutics.....	17
7. Bronchopulmonary Dysplasia.....	20
8. Prevention and Treatment of Neonatal Brain Injury.....	24
9. Therapeutics for Neonatal Sepsis.....	26
10. Neonatal Abstinence Syndrome	33
11. Medications and Breastfeeding	35
12. Fetal Pharmacokinetics	39

Section 2: Recent Advances in Therapeutics

1. Alport Syndrome	45
2. Novel Nephrotherapeutics.....	47
3. Cardiovascular Piezo Ion Channelopathy	50
4. Phosphodiesterase Inhibitors in Neurologic Disease.....	56
5. Prader-Willi Syndrome	59
6. Opioid Receptors in Neurologic Disorders	62
7. Alzheimer's Dementia	65
8. Transient Receptor Potential Channels in Pain Management	69
9. Persistent Pain Therapy	74
10. G Protein Coupled Receptors Based Therapeutics	77

Section 3: Immunotherapeutics

1. Immune Checkpoint Inhibitors	83
2. Combination Immunotherapies.....	88

3. Angiogenic Blockers for Cancer Immunotherapy	94
4. Immunotherapy in Neuroinflammation	98
5. Myeloid Derived Suppressor Cell Blockade.....	99
6. Allergy Therapeutics	101
7. Immunosuppressive Therapeutics.....	102
8. Allergic Bronchopulmonary Aspergillosis	107
9. Atypical Haemolytic Uremic Syndrome	109
10. von Willebrand Disease	112

Section 4: Drug Design and Discovery

1. Drug Design Augmentation by Artificial Intelligence	119
2. Computational Approaches to Drug Discovery	121
3. Antimyopia Drug Development.....	123
4. Phosphoinositide Targeting Drug Development	130
5. Artificial Intelligence for Improvement of Drug Safety	138
6. Drug Discovery	143
7. Drugging Enzymes with Multiple Substrates	145
8. Sodium Channel Voltage Sensor	146
9. Oral Drug Absorption Designing	147
10. Designed Peptides for Drug Delivery	149

Section 5: Enzyme Therapeutics

1. Protein Kinase Inhibitors	159
2. Muscarinic Acetylcholine Receptor Allosteric Modulators for Neurologic and Psychiatric Disorders	165
3. Sirtuins in Neurodegenerative and Cardiometabolic Diseases	170
4. Allosteric Inhibitors	173
5. JAK-STAT Signalling Therapy in Disease.....	174
6. Natural Peptides in Therapeutics	181
7. Ligand Bias for Class A GPCRs	185
8. Allosteric Modulation of Metabotropic Glutamate Receptors.....	187
9. Endocannabinoid Therapeutics	193
10. Adhesion G Protein Coupled Receptors Therapeutics.....	198

Section 6: Genome Therapeutics

1. Micro-RNA Therapeutics.....	207
2. Driver Mutations and Cancer	213

3. Small Molecule Therapeutics.....	217
4. Chemogenetics	223
5. Mitochondrial Permeability Transition	225
6. Wolfram Syndrome: Current Therapy.....	231
7. Urotensinergic System Targeting	233
8. Toxicogenomics	234
9. Lysosomal Acid Lipase in Immunometabolic Therapeutics	241
10. Immunostimulatory Therapeutics	248

Section 7: Pharmacotherapeutics

1. Pyrazinamide	255
2. Oxytocin	257
3. Glucocorticoids	263
4. Electroceuticals	267
5. Antidepressants	272
6. Dermal Pharmacotherapy.....	275
7. Metabolic Phenotyping	278
8. Cancer Cell Dormancy Targeting Therapeutics	283
9. Endocrine Fibroblast Growth Factors Therapeutics in Metabolic Diseases	289
10. Rhabdomyosarcoma.....	297

Section 8: Drug Discovery

1. Drug Synergy and Efficacy	309
2. Aldehyde Dehydrogenase Inhibitors.....	310
3. Drug Design for Solute Carrier Transporters.....	316
4. Clostridium Difficile Toxin	320
5. Biased Signalling Quantification	322
6. Drug Screening	323
7. Liquid Biopsies	328
8. Intracellular Lipopolysaccharide Sensing.....	336
9. Genomic Instability.....	342
10. Lipoprotein A Targeted Therapies.....	349

Section 9: Oncotherapeutics

1. Epidermal Growth Factor Receptor Inhibitors	357
2. Heat Shock Factor 1 Inhibitors for Cancer Therapy	361

3. Transcription Factors Modulators	366
4. Transcriptional Coregulator Cancer Therapy	367
5. Nanotechnology in Metastasis Therapy	372
6. Molecular Modulators of Metastasis	376
7. Small Cell Lung Cancer Therapeutics	381
8. Triptolide Therapy for Cancer	383
9. Alkylating Agents	388
10. Calcitonin Gene Related Peptide Oncotherapeutics	394

Section 10: Cell Specific Therapeutics

1. Neuropharmacology	401
2. Gastrointestinal Pharmacology	406
3. Cardiovascular Pharmacology	412
4. Friedreich's Ataxia	418
5. Rett Syndrome	421
6. Migraine	423
7. Duchenne Muscular Dystrophy	429
8. Hormesis	432
9. Preeclampsia Therapeutics	434
10. Phage Display	435