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2.2.5 PEG Conjugates of Oligonucleotides, Aptamers, and siRNAs  
2.2.6 PEG-drug Conjugates (PEG prodrugs); 2.2.7 PEGylation of Viruses; 2.3 LIMITATIONS OF PEG CONJUGATES; 2.4 POLYGLYCEROL-BASED CONJUGATES; 2.4.1 HPG-drug Conjugates; 2.4.2 HPG-peptide and Protein Conjugates; 2.4.3 HPG Glycoconjugates; 2.4.4 HPG-Red Blood Cell Conjugates for Antigen Protection; 2.5 CONCLUSIONS; ACKNOWLEDGMENTS; REFERENCES; 3 SYNTHETIC POLYMER BIOCONJUGATE SYSTEMS; 3.1 INTRODUCTION; 3.2 PEPTIDE OR PROTEIN BIOCONJUGATION TECHNIQUES; 3.2.1 Conjugation with Amino Acid; 3.2.2 Conjugation with Peptide Chain; 3.2.3 Conjugation with Proteins; 3.3 CARBOHYDRATE BIOCONJUGATION TECHNIQUES; 3.4 CONJUGATION WITH NUCLEIC ACID; 3.5 CONJUGATION WITH DRUGS; 3.6 CONJUGATION WITH CONTRAST AGENTS; 3.6.1 Polymers for Magnetic Resonance Imaging; 3.6.2 Polymers for Optical Imaging; 3.6.3 Polymers for Nuclear imaging; 3.7 CONCLUSION AND PERSPECTIVE; REFERENCES; 4 NATURAL POLYMER BIOCONJUGATE SYSTEMS; 4.1 INTRODUCTION; 4.2 NATURAL POLYMER SYSTEMS; 4.2.1 Protein-origin Polymer Bioconjugates; 4.2.2 Polysaccharidic Polymer Bioconjugates; 4.3 CONCLUSION AND FUTURE DIRECTIONS; ACKNOWLEDGMENT; REFERENCES; 5 DENDRIMER BIOCONJUGATES: SYNTHESIS AND APPLICATIONS; 5.1 INTRODUCTION-DENDRIMERS FOR BIOCONJUGATE CHEMISTRY; 5.2 DENDRIMER-DRUG CONJUGATES; 5.2.1 Motivation for the Development of Dendrimer-Drug Conjugates; 5.2.2 Dendrimer-DOX Conjugates; 5.2.3 Dendrimer-MTX Conjugates; 5.2.4 Dendrimer-TAX Conjugates; 5.2.5 Dendrimer-NAC Conjugates; 5.2.6 Dendrimer-Sulfonic Acids; 5.3 DENDRIMER-CARBOHYDRATE CONJUGATES; 5.3.1 Motivation for the Development of Dendrimer-Carbohydrate Conjugates; 5.3.2 Dendrimer-Mannose Conjugates; 5.3.3 Dendrimer-Galactose Conjugates; 5.3.4 Dendrimer-AcNA Conjugates; 5.4 DENDRIMER CONJUGATES WITH IMAGING AGENTS

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Sommario/riassunto

This book describes the chemistries involved in bioconjugation followed by an extensive review of all types of bioconjugates (polymers, dendrimers, nanoparticles, carbon nanotubes) reported in the literature for different bio-related applications. A section is devoted to the physico-chemical and biochemical properties of bioconjugates and implications in their uses. Finally, the book also provides a comprehensive account about the significance of bioconjugation - coverage that is lacking in many of the current resources available.

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