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Collana	Handbook of Hydrocarbon and Lipid Microbiology
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Soggetti	Cell membranes - Formation Fatty acids Lipids
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Nota di contenuto	AcetylCoA Synthesis and Regulation -- AcetylCoA Synthesis and Role in Bacteria -- Autophagy in Stationary Phase of Growth -- Bacterial Sphingolipids -- Cell-contact-dependent Outer Membrane Exchange in Myxobacteria -- Contributions of Membrane Lipids to Bacterial Cell Homeostasis Upon Osmotic Challenge -- Dynamic Membrane Structure: Function Analysis by Means of Chemical Probes -- Evolution of Hydrophobic Storage Polymers -- Evolution of Lipids -- Evolution of Membranes -- Fatty Acid Synthesis and Regulation -- Fatty Acids: Introduction -- Formation of Bacterial Glycerol-based Membrane Lipids: Pathways, Enzymes, Reactions -- Formation of Fatty Acids -- Formation of Hopanoids -- Formation of Isoprenoids -- Formation of Lipochitin Oligosaccharide Signaling Molecules -- Functional Roles of Individual Membrane Lipids in Bacteria, Archaea and Eukaryotic Microbes -- Functional Roles of Non-membrane Lipids in Bacterial Signaling -- Hopanoids and Membrane Integrity and pH Homeostasis -- Lipid A -- Lipid Chaperones -- Lipid Chaperones and Regulation -- Lipid Intermediates in Bacterial Peptidoglycan Biosynthesis -- Lipid Metabolism in Microalgae -- Lipid Rafts -- Lipid-protein Interactions -- Lipid-protein Interactions Determining Membrane Fluidity in Prokaryotes and Eukaryotes -- Lipids as Receptors -- Lipoteichoic Acid Synthesis and Function in Gram-positive Bacteria -- Membrane

Disrupting Proteins -- Membrane Formation and Regulation -- Membrane Homeostasis Upon Nutrient (C, N, P) Limitation -- Membrane Homeostasis upon pH Challenge -- Membrane Lipid Biogenesis -- Membrane Structure:Function Analysis by Means of Chemical Probes -- Membrane Structure:Function Analysis Through Reconstitution In Vitro -- Membrane Vesicles, Nanopods and Nanotubes of Archaea -- Metabolism and Regulation of Glycerolipids in Yeast -- Metabolism and Roles of Sphingolipids in Yeast *Saccharomyces cerevisiae* -- Modeling Lipid Membranes -- Modeling Lipid Metabolism in Yeast -- Mycolic Acids: Structures, Biosynthesis, and Function -- Nonpolar Lipids in Yeast: Synthesis, Storage and Degradation -- Ornithine Lipids and Other Amino Acid-containing Acyloxyacyl Lipids -- Outer Membrane Extension Nanowires of Bacteria -- Outer Membrane Vesicles of Bacteria -- Phenolic Lipids Synthesized by Type III Polyketide Synthases -- Players in the Nonpolar Lipid Game - Proteins Involved in Nonpolar Lipid Metabolism in Yeast -- Polyhydroxyalkanoate Biogenesis -- Preface: Biogenesis of Fatty Acids, Lipids and Membranes -- Production of Wax Esters by Bacteria -- Protein Lipidation, Elucidation by Chemical Proteomics, and its Functional Roles -- Regulation of Membrane Lipid Homeostasis in Bacteria upon Temperature Change -- Role of Lipid Domains in Bacterial Cell Processes -- Role of Lipids in the Eukaryotic Secretory Pathway -- Role of the BAM Complex in Outer Membrane Assembly -- Structure:Function of Transmembrane Domains of Proteins and Transmembrane Organelles -- Synthesis of AcetylCoA from Carbon Dioxide in Acetogenic Bacteria -- Synthesis of Acetyl-CoA from Carbon Dioxide in Acetogenic Bacteria -- The Biosynthesis and Evolution of Archaeal Membranes and Ether Phospholipids -- Type III Polyketide Synthases Responsible for Phenolic Lipid Synthesis -- Vitamin Formation from Fatty Acid Precursors -- Wax Ester and Triacylglycerol Biosynthesis in Bacteria.

Sommario/riassunto

Concise chapters, written by experts in the field, cover a wide spectrum of topics on lipid and membrane formation in microbes (Archaea, Bacteria, eukaryotic microbes). All cells are delimited by a lipid membrane, which provides a crucial boundary in any known form of life. Readers will discover significant chapters on microbial lipid-carrying biomolecules and lipid/membrane-associated structures and processes.
