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Descrizione fisica	1 online resource (161 illus., 115 illus. in color. eReference.)
Collana	Handbook of Hydrocarbon and Lipid Microbiology
Disciplina	574.875
Soggetti	Microbiology Industrial microbiology Environmental engineering Biotechnology Bioremediation Biochemistry Microbial ecology Industrial Microbiology Environmental Engineering/Biotechnology Microbial Ecology
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Nota di bibliografia	Includes bibliographical references and index.
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 Saccharamyces 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.