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Nota di contenuto	Modern Biooxidation; Contents; Preface; List of Contributors; 1 Biooxidation with PQQ- and FAD-Dependent Dehydrogenases; 1.1 Introduction; 1.2 Basic Technical Information Regarding Membrane-bound Enzymes; 1.2.1 Preparation of Cytosolic Fractions and Membrane Fractions; 1.2.2 EDTA Treatment of the Membrane Fraction Carrying PQQ as Coenzyme; 1.2.3 Assays of Enzyme Activity; 1.3 PQQ-Dependent Dehydrogenases; 1.3.1 Alcohol Oxidation; 1.3.1.1 Membrane-Bound Alcohol Dehydrogenase (ADH III); 1.3.1.2 Soluble Alcohol Dehydrogenases 1.3.1.3 Cyclic Alcohol Dehydrogenase (Secondary Alcohol Dehydrogenase), Membrane-Bound1.3.2 Glucose Oxidation; 1.3.2.1 Membrane-Bound D-Glucose Dehydrogenase (m-GDH); 1.3.2.2 Soluble D-Glucose Dehydrogenase (s-GDH); 1.3.2.3 Applications of Quinoprotein GDHs as D-Glucose Sensors; 1.3.3 Polyol Oxidation; 1.3.3.1 D-Arabitol Dehydrogenase, Membrane-Bound; 1.3.3.2 meso-Erythritol Oxidation Dehydrogenase, Membrane-Bound; 1.3.3.3 D-

Gluconate Oxidizing Polyol Dehydrogenase, Membrane-Bound; 1.3.3.4 Glycerol Dehydrogenase, Membrane-Bound; 1.3.3.5 D-Mannitol Dehydrogenase, Membrane-Bound
1.3.3.6 Ribitol Dehydrogenase, Membrane-Bound1.3.3.7 D-Sorbitol Dehydrogenase, Membrane-Bound; 1.3.3.8 L-Sorbosone Dehydrogenase, Membrane-Bound; 1.3.4 Quinate Oxidation. Membrane-Bound Quinate Dehydrogenase (QDH); 1.4 FAD-Dependent Dehydrogenase; 1.4.1 D-Fructose Dehydrogenase, Membrane-Bound; 1.4.2 D-Gluconate Dehydrogenase, Membrane-Bound; 1.4.3 D-Hexosamine Dehydrogenase, Membrane-Bound; 1.4.4 2-Keto-D-gluconate Dehydrogenase, Membrane-Bound; 1.4.5 Sorbitol Dehydrogenase, Membrane-Bound; 1.5 Miscellaneous; 1.5.1 Aldehyde Dehydrogenase, Membrane-Bound; References
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2.4.1 Laccase Engineering

Sommario/riassunto

Filling a gap in the literature, leading expert editors and top international authors present the field of biooxidation from an academic and industrial point of view, taking many examples from modern pharmaceutical research. Topics range from the application of different monooxygenases to applications in the pharmaceutical industry, making this volume of high interest not only for those working in biotechnology but also for organic synthetic chemists, among others.