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Nota di contenuto	About the Editors -- Regioselective Hydroxylation of Rhododendrol by CYP102A1 and Tyrosinase -- Exploring Metagenomic Enzymes: A Novel Esterase Useful for Short-Chain Ester Synthesis -- Counterbalance of Stability and Activity Observed for Thermostable Transaminase from Thermobaculum terrenum in the Presence of Organic Solvents -- Kinetic Analysis of the Lipase-Catalyzed Hydrolysis of Erythritol and Pentaerythritol Fatty Acid Esters: A Biotechnological Application for Making Low-Calorie Healthy Food Alternatives -- Influence of Carrier Structure and Physicochemical Factors on Immobilisation of Fungal Laccase in Terms of Bisphenol A Removal -- Estimating the Product Inhibition Constant from Enzyme Kinetic Equations Using the Direct Linear Plot Method in One-Stage Treatment -- Polymer-Assisted Biocatalysis: Polyamide 4 Microparticles as Promising Carriers of Enzymatic Function -- Engineering of Bifunctional Enzymes with Uricase and Peroxidase Activities for Simple and Rapid Quantification of Uric Acid in Biological Samples -- Rigorous Model-Based Design and Experimental Verification of Enzyme-Catalyzed Carboligation under Enzyme Inactivation -- Conversion of Shrimp Head Waste for Production of a Thermotolerant, Detergent-Stable, Alkaline Protease by Paenibacillus sp. -- Catalytic Activities of Multimeric G-Quadruplex DNAzymes -- Biotransformation with a New Acinetobacter sp. Isolate

for Highly Enantioselective Synthesis of a Chiral Intermediate of Miconazole -- Enhancing Enzymatic Properties of Endoglucanase I Enzyme from Trichoderma Reesei via Swapping from Cellobiohydrolase I Enzyme -- Bioproduction of Isoprenoids and Other Secondary Metabolites Using Methanotrophic Bacteria as an Alternative Microbial Cell Factory Option: Current Stage and Future Aspects -- Microbial Phosphotriesterase: Structure, Function, and Biotechnological Applications.

Sommario/riassunto

At present, the increasing demand for novel biotechnological products is supported through the continuous development of biocatalytic applications. As a consequence, the progress of research regarding enzymatic catalysis in aqueous, non-aqueous, organic (polar or non-polar), and/or non-solvent media is decisive. Experimental design methods, which also may comprise in silico studies, the design of specific reactors and conditions, the reactions of significant chemical and/or biochemical processes that are relevant to industrial production, enzyme kinetic methods, the investigation of enzymatic mechanisms and the use of immobilized enzymes and/or microbial cells on various inert matrices, are all useful. A plethora of enzymes of several classes, which may potentially be used as biocatalysts in biotechnological applications, are available. Among these enzymes, the more common are oxidoreductases (laccase, catalase, glucose oxidase, etc.), hydrolases (amylases, lipases, proteases, amidases, cellulases, esterases, etc.), isomerases (epimerases, topoisomerases, mutases, etc.), and others. By means of the aforementioned biocatalysts and the utilization of specific biotechnological methods, important, cost-effective, sustainable, and environmentally friendly processes have been applied for the synthesis and/or the conversion of a huge number of market-required products.