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Nota di contenuto	Introduction -- Chapter 1: Dilute Acid Pretreatment Efficiency on Various Solid Loadings and Effect of Different Neutralizing Agents on Xylulosic Ethanol Production -- Chapter 2: Effect of BGA Biofertilizers Using Different Carrier Materials on Rice Crop -- Chapter 3: Identification of Differentially Expressed Terminal Heat Stress Associated Proteins in Developing Grains in Wheat ( <i>Triticum Aestivum</i> L.) -- Chapter 4: The genetic toxicity potential of heavy metals (Zn, Cu) on <i>Vigna radiata</i> , <i>Triticum aestivum</i> and <i>Cicer arietinum</i> -- Chapter 5: Production, Optimization, and Charaterization of Siderophore by <i>Pseudomonas Aeruginosa</i> (C3) Isolated From Rhizospheric Soil -- Chapter 6: Development of Marker in the Soft Gold Mushroom <i>Cordyceps</i> Sp. For Strain Improvement -- Chapter 7: Optimization of Microwave Assisted Pretreatment of Rice Straw with FeCl <sub>3</sub> in

Combination with H<sub>3</sub>PO<sub>4</sub> for Improving Enzymatic Hydrolysis -- Chapter 8: Profiling Indolic Auxins Produced by the Strains of *Aspergillus* Using Novel HPTLC Technique -- Chapter 9: Comparative Analysis of Cytotoxic Potential of Crude Extracts and Fractionated Isolates from *Moringa Oleifera* Lam -- Chapter 10: Hydroxy Fatty Acid from *Camelina Sativa* Seed Oil for Industrial Application -- Chapter 11: Comparison of Different Planting Methods to Determine the Precision of Phenotyping Wheat in Field Experiments -- Chapter 12: Effect of extraction temperature and different carrier agents on the physicochemical and antioxidant properties of spray dried *Murraya koenigii* (Linn.) leaf extract -- Chapter 13: Isolation and characterization of microbial Asparaginase to mitigate Acrylamide formation in food -- Chapter 14: Small Colony Variant Selection, Biofilm Induction and Interspecies Interactions of Ocular Clinical *Pseudomonas aeruginosa* -- Chapter 15: Comparative analysis of phytochemicals of healthy and symptomatic *Clerodendrum inerme* -- Chapter 16: Synthesis of Silver Nanoparticle of Aqueous extract of *Allium Fistulosum* and Its Efficiency against Bacterial Contaminants from Industrial waste water and its Photocatalytic potential -- Chapter 16: Exploration of biocontrol and growth promoting activity of bacterial strains isolated from the sugarcane crop.

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### Sommario/riassunto

Biotechnology refers to the use or manipulation of an organism or parts of an organism. While the early applications were certainly simpler (though still relevant), modern plant biotechnology is primarily associated with molecular biology, cloning and genetic engineering. Over the last 50 years, several key discoveries have revolutionized the biological sciences and enabled the rapid growth of the biotechnology industry. This book gathers handpicked articles presented by national and international scientists at the International Conference on Biotechnology and Biological Sciences, BIOSPECTRUM 2017. It highlights the works of researchers and students in India and abroad on plant biotechnology and its applications in addressing various agricultural and food production-related issues. The respective papers explore a range of advances in plant biotechnology, e.g.: the cytotoxic potential of *Moringaoleifera lam*; the use of the entomo-pathogenic fungi *Cordyceps* sp. as unique and valuable sources of bioactive compounds; and strain improvement strategies for *Cordyceps* sp. In addition, they discuss the use of low-cost blue green algal biofertilizer comprising four blue green algal strains in rice fields; and the use of lignocellulosic materials as potential renewable energy resources for the production of fuels. This book will be extremely useful for researchers and students of biotechnology and plant science, providing an essential update on the latest findings and trends.

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