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Nota di contenuto	Plant Viral Vectors: Important Tools for Biologics Production -- Plant molecular farming – Production of virus-like particles in plants -- Molecular Farming of Industrial Enzymes: Products and Applications -- Plant molecular farming for the bulk production of industrial enzymes -- Plant molecular farming of antimicrobial peptides for plant protection and stress tolerance -- Production of recombinant proteins using plant cell suspension cultures and bioreactor engineering: A short review -- Scaling up the Plant Molecular Farming via Bioprocessing of Plant Cell Suspension Culture -- Molecular farming of pharmaceutical proteins in different crop systems: a way forward -- Molecular farming for the production of recombinant pharmaceutical proteins in plants -- Production of pharmaceutical proteins in genetically modified seeds -- Plant Molecular Farming for Vaccine Development -- Delivery of drugs and vaccines through plant molecular farming -- Plant-Based Veterinary Vaccines -- Development of Oral Prophylactic and Therapeutic Vaccines against HPV on the Basis of Plant Expression System -- Medical Applications of Plant Virus Nanoparticles -- Antigen-specific immunotherapy for allergic and

autoimmune diseases using plant-made antigens -- Plant Molecular Pharming to Overcome the Global Impact of Neglected Tropical Diseases -- Microbial Production of Pharmaceutically-important Plant Natural Products -- Tobacco Plants as a Versatile Host for the Expression of Glycoproteins -- The Use of Rice Seed as Bioreactor -- Legume seed: a useful platform for the production of medical proteins/peptides -- Duckweed, an Efficient Green Bio-factory for the Production of Recombinant Proteins -- Microalgae as a Bioreactor for Molecular Farming for the Production of Oral Edible Vaccines against Infectious Diseases of Humans and Animals -- Bioengineering of Cannabis Plants from Lab to the Field: Challenges and Opportunities.

Sommario/riassunto

This edited book is a comprehensive compilation of applications of plant molecular farming in various fields including agriculture, industry and medicine, using different plant/crop systems as bioreactors for the bulk production of products of interest. The book places special emphasis on plant molecular farming being utilized for the bulk production of biologics, industrial enzymes, vaccines, drugs and recombinant pharmaceutical proteins. Plant molecular farming (PMF) is an upcoming promising interdisciplinary subject, and therefore the book contains contributions from experts across the disciplines. The utilization of plant viral vectors to produce biologics, virus-like particles and antimicrobial peptides via PMF have been highlighted. Molecular farming for the bulk production of recombinant pharmaceutical proteins and various types of human and veterinary vaccines in different crops/plants and genetically modified seeds has been included. The process of scaling up to manufacturing capacity, product formation by bioprocessing of plant cell suspension culture, and bioreactor engineering have been incorporated. Lastly, the book provides special coverage on utilizing PMF made products to control neglected tropical diseases and plant-made antigens as immunotherapies for allergic and autoimmune diseases. The book has chapters from leading experts on the subject, making it equally beneficial for researchers, policy planners, industrialists, medical professionals, entrepreneurs, and students of various related disciplines.