1. Record Nr. UNINA9910906192003321 Autore Singh Shachi **Titolo** Plant Elicitor Peptides: New Tool for Sustainable Agriculture / / edited by Shachi Singh, Rajesh Mehrotra Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 9789819763740 9819763746 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (354 pages) Altri autori (Persone) MehrotraRajesh Disciplina 631.52 660.6 Plant biotechnology Soggetti Plant molecular biology **Plants** Stress (Physiology) Plants - Development Plant Biotechnology Plant Molecular Biology Plant Signalling Plant Stress Responses Plant Development Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Plant elicitor peptides as amplifiers of immune responses against biotic stressors -- 2. 2. Peptide elicitors for defense against abiotic stress -- 3. Elicitor peptide mediated signalling cascades during plantpathogen interaction -- 4. Inceptin: Exploring its role as a peptide elicitor in plant defense mechanisms -- 5. Endogenous peptides involved in plant growth and development -- 6. Effector mediated defence mechanisms in plants against phytopathogens -- 7. Plants retaliating defense strategies against herbivores -- 8. Plant Elicitor

Peptides: Mechanism of Action and Its Applications in Agriculture -- 9. Legume health: unveiling the potential of plant elicitor peptides -- 10. Harnessing Plant Innate Immunity for Improved Biomass Production in

Bioenergy Crops -- 11. Exogenous elicitors as inducers of environmental stress tolerance in Wheat (Triticum aestivum L.) crop -- 12. Recent Advancement on Peptide Research and their Application in Eco-agriculture -- 13. Plant immunity inducers: Strategies to identify and isolate them to boost defense responses in plants -- 14. Deep Learning Approaches for Off-targets Prediction in CRISPR-Cas9 Genome Editing to Improve Resistant in Plants -- 15. Peps, Pathogens and Pests: Challenges and Opportunities for Usage of Pep Signaling in Sustainable Farming.

Sommario/riassunto

This book provides an overview on plant innate immunity triggered by peptide elicitors. It explains how peptide signals provide protection against phytopathogens and can act as an eco-friendly crop protectant. The chapters in the book deal with identification and characterization of plant elicitor peptides and their receptors, understanding the process of defense activation conferred by peptide signals, methods of isolation and application. Various new techniques and future strategies are discussed for utilization of these immunity inducers. Molecular and functional characterization of the elicitors will be useful in the development of elicitation-based technology, including large scale production and commercialization. This book serves as an essential resource for researchers and industries working in the field of physiology and biotic stress management of crop plants.