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Title:	Nmr spectroscopy and the plant metabolome.
Authors:	Dorai, Kavita (/jspui/browse?type=author&value=Dorai%2C+Kavita)
Keywords:	spectroscopy Plant metabolome
Issue Date:	2021
Citation:	emagres. 9(4).
Abstract:	Nuclear magnetic resonance (NMR)-based metabolomics has led to several pathbreaking developments in the characterization of the plant metabolome. New techniques for data processing and analysis of NMR spectra have improved the identification and quantitation of primary and secondary plant metabolites. The exciting possibility of using machine learning algorithms and artificial-intelligence tools such as deep learning and neural networks for multivariate statistical analysis of NMR data has opened up new avenues of research in integrating 'Big Data' methods with plant metabolomics. Quantitative metabolite fingerprinting using two-dimensional (2D) ultrafast and high-resolution magic angle spinning (HR-MAS) NMR experiments has provided unique perspectives on the interactions of plant metabolic networks and their responses to external environment stresses. Plant NMR metabolomic studies have contributed significantly to the understanding of plant classification and taxonomy, the interaction of plant metabolic networks, bioactivity and mechanism of action of significant metabolites in medicinally important plants, genetically modified plants and their ecological implications, plant-organism interactions, plant defense against herbivore and pathogen attacks, and plant metabolome response to abiotic stress.
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://doi.org/10.1002/9780470034590.emrstm1629">https://doi.org/10.1002/9780470034590.emrstm1629</a> ( <a href="https://doi.org/10.1002/9780470034590.emrstm1629">https://doi.org/10.1002/9780470034590.emrstm1629</a> ) <a href="http://hdl.handle.net/123456789/4640">http://hdl.handle.net/123456789/4640</a> ( <a href="http://hdl.handle.net/123456789/4640">http://hdl.handle.net/123456789/4640</a> )
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