Nutrigenomics: New frontiers in nutrition

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Plant omics and food engineering offer novel perspectives and value to sustainable agriculture and ecological sciences. They contribute to advances in nutrigenomics, according to a Special Issue on Plant Omics, Food Engineering and New Frontiers in Nutrigenomics in the peer-reviewed *OMICS: A Journal of Integrative Biology*.

"Nutrigenomics contributes to precision nutrition by unraveling the mechanisms of person-to-person and population differences in response to food exposures. Multi-omic variability in plants, and engineering of food composition, are the 'input' functions leading to variability in nutritional outcomes. The OMICS December special issue presents new findings on plant omics and food engineering that address these knowledge dimensions. The articles signal new frontiers in nutrigenomics and the potentials of systems science-driven food engineering for precision nutrition," states Vural Özdemir, MD, Ph.D., Editor-in-Chief of OMICS: A Journal of Integrative Biology.

Plant omics is also relevant to identifying novel therapeutics for use in the current COVID-19 pandemic.

Featured in the special issue is an article by Anil Kumar, Ph.D., at Rani Lakhmi Bai Central Agricultural University, and coauthors. They discuss the future of food based on multi-omic analyses of iron and zinc homeostasis in finger millet, a staple food of agricultural importance worldwide.

Maria Taciana Cavalcanti Vieira Soares, at Rural Federal University of Pernambuco, Recife, and coauthors focused on the genetic mobility of Enterococcus faecium. They report on new findings and an approach based on comparison of the genetic mobility of (1) probiotic, (2) pathogenic, and (3) nonpathogenic and non-probiotic strains, so as to differentiate probiotics, and inform their safe use.

More information: Vural Özdemir. Special Issue: Plant Omics, Food Engineering, and New Frontiers in Nutrigenomics, *OMICS: A Journal of Integrative Biology* (2020). DOI: 10.1089/omi.2020.0203

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