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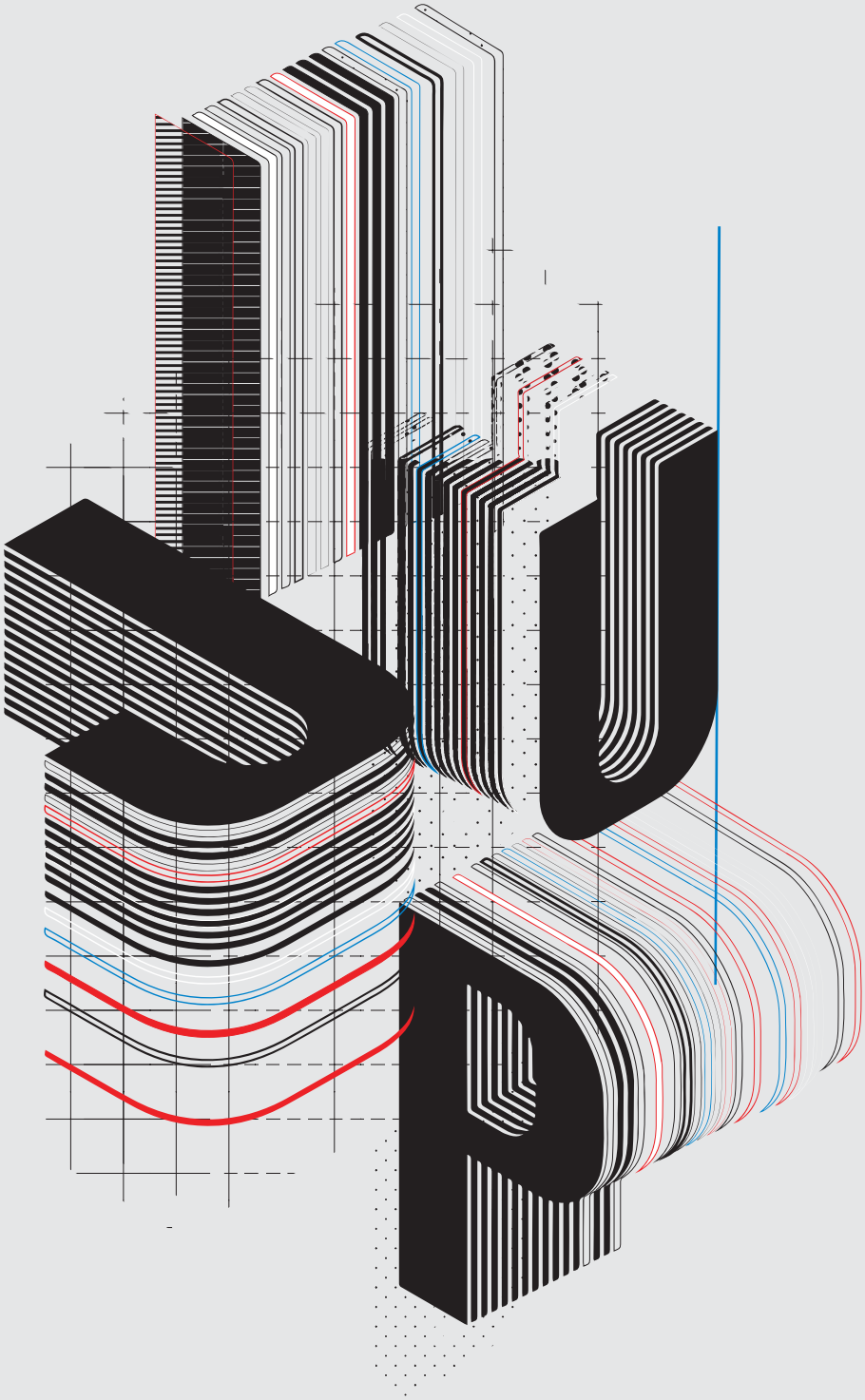

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- ## 15147 | Papaya seeds: a sustainable by-product of excellence of natural compounds with beneficial effects for health

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Consumption of tropical fruits has been increasing in international markets due to their nutritional and organoleptic properties. However, during the fruit production, a high generation of by-products such as skin, seeds and non-edible pulp are obtained [1]. Disposal of these by-products represents a serious problem related to waste handling, environmental considerations, legal restrictions and economical limitations [2]. Currently, an alternative to decrease this problem is to use these by-products in the design and development of functional foods or nutraceutical ingredients. Despite this, many countries such as USA, Australia and European Union do not use the papaya by-products [3]. According to some authors, 6.51% of seeds, 8.47% of skin and 32% of unusable pulp are produced during papaya processing [1].
The main natural bioactive compounds reported in papaya seeds are carotenoids, phenolic acids and flavonoids [1]. Due that, papaya seeds could be used as source of antimicrobial, antioxidants, colorants, flavouring and thickening agents [1]. In this work, we reviewed nutritional composition and overview the main compounds associated with health beneficial effects, namely those with interesting biological activities that have been described in papaya seeds with economic potential for several applications [1-3]. More studies about the functional properties of papaya by-products are needed.

[1] Ovando-Martinez, M., et al.(2018), Effect of ripening on physico-chemical properties and bioactive compounds in papaya pulp, skin and seeds. Indian Journal of Natural Products and Resources, 9(1), 47-59.
[2] Ayala-Zavala, J., et al.(2011), Agro-industrial potential of exotic fruit byproducts as a source of food additives. Food Research International, 44,1866-1874.
[3] Ayala-Zavala, J. F., et al.(2010), Antioxidant enrichment and antimicrobial protection of fresh-cut fruits using their own byproducts: looking for integral exploitation, Journal of Food Science, 75, R175-R181.