ANTIOXIDANT AND CHELATING ACTIVITY OF *JATROPHA CURCAS* L. PROTEIN HYDROLYSATES.

ABSTRACT

BACKGROUND: Antioxidant and chelating activities were determined in protein hydrolysates that were produced by treating a protein isolate of a non-toxic genotype of *Jatropha curcas* with the protease preparation alcalase.

RESULTS: 50 min protein hydrolysate with a degree of hydrolysis of 31.7% showed highest antioxidant and chelating activity. These activities were also determined in six peptidic fractions that were separated by gel filtration chromatography of the 50 min hydrolysate. The lower-molecular-weight peptidic fractions had the highest antioxidant and chelating activities, which correlated with a higher content in antioxidant and chelating amino acids such as tyrosine and histidine.

CONCLUSION: Results show that *J. curcas* represents a good source of bioactive peptides. This may be important for the revalorization of defatted *J. curcas* flour, a by-product resulting form oil extraction for biodiesel production. This is especially important in Third World and developing countries such as Mexico.

http://onlinelibrary.wiley.com/doi/10.1002/jsfa.4357/abstract

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Revista: Journal of the Science of Food and Agriculture. Volume 91, Issue 9, pages 1618–1624.