

## A nutraceutical approach to west Amazonian Ecuador plant resources

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Ecuadorian Amazonian forest offers a wide range of research opportunities with an approach aimed to characterize the nutraceutical potentiality of endemic plant matrices, or therefore plants adapted to live in an equatorial habitat. Ecuadorian pseudocereal seeds of *Amaranthus caudatus* var. Oscar Blanco and *A. caudatus* var. Victor Red (*Amaranthaceae*), *Chenopodium quinoa* (*Chenopodiaceae*) and *Bertholletia excelsa* (*Lecythidaceae*) were extracted and processed in order to reach an in-depth chemical characterization of the lipidic fraction by HPLC and GC (1). The chemicals investigated for these ecuadorian matrices were  $\alpha$ -,  $\beta$ -,  $\gamma$ -,  $\delta$ -tocols and fatty acids. Tocopherols and tocotrienols (vitamin E isomers) are well known natural antioxidants and their presence in oilseeds is often correlated with the relative abundance of unsaturated fatty acids. Besides their known activity as antioxidants and free radical scavengers, they have also proved active against hypercholesterolemic arteriosclerosis (2). The results, pointed out the nutraceutical value of wild ecuadorian species, mainly because of the important total tocopherols and tocotrienols content detected, and the dietary potential of the fatty acid profile. The preliminary results of the antioxidant activity of the matrices suggest their employ not only in the health food but also in the cosmetic market (3).

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2. Ozer, N.K.; Azzi, A. Effect of vitamin E on the development of atherosclerosis, *Toxicology* 2000, 148, 179-185.
3. Johns T, Romeo J. 1997. Functionality of Food Phytochemicals. Plenum Press, New York.