

Abstract of Presentation

Note: This paper should be typed in “Times New Roman” of 12pt.

Name (Underline the family name)

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Presentation Title(Should be no more than 20 words):

Advances in the study of pseudocereals and future challenges

Abstract :

Pseudocereals are broadleaf plants, non-grasses ones, that are used in the same way as cereals. Botanically they are assigned to the *dycotyledonae*.

Among the best known pseudocereals may be mentioned quinoa, chia, amaranth and buckwheat. All of them have advantageous nutritional properties and are able to increase the range of starch-rich plants for human nutrition.

Amaranth, quinoa and chia were three of the most important crops for Pre-Colombian cultures in Latin-America, while buckwheat originates from the middle of Asia.

The protein content of grains of these pseudocereals is higher than in cereal species and the quality of the protein are better, especially in terms of lysine content. The protein composition of these grains is typically for *dycotyledonae*: 2S albumins and 7S and 11S globulins, and a very low amount of prolamins.

Chia, meanwhile, has an excellent lipid profile with a high content of essential fatty acids, particularly omega 3.

In our country and also globally there is currently a strong interest in the study of these pseudocereals. In the course of this presentation will focus our attention to different aspects related to amaranth. We show ongoing studies relating to the identification of the polypeptide composition of a globulin fraction of *Amaranth hypochondriacus*. We also discuss on the functional properties, in particular those related to the surface properties of protein molecules, as well as different biological activities presented in peptides encrypted in the amino acid sequence of storage proteins of amaranth seeds. In this last case, we refer particularly to its anti-proliferative activity. Finally we will mention some results on genes that may be useful in biotechnology as well as the development of highly productive cultivars for marginal areas.