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## *In vitro* culture of *Moringa oleifera*, multipurpose specie for Chile

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**M**oringa oleifera is a native crop to North India, Bangladesh, Afghanistan and Pakistan. Currently grows throughout the tropics. Fruits, seeds and roots are used for human consumption and their stems are used for animal feed. The species has become very important because contain 18 of the 20 amino acid that the human body required and is one of the plant species with higher seed oil content, between 30-40%. The aim of this study was to evaluate *in vitro* germination of zygotic embryos of *M. oleifera* and to select genotypes by their *in vitro* survival. For the embryo rescue, seeds were disinfected in 70% ethanol (v/v) for 3 min and 50% sodium hypochlorite (v/v) for 20 min followed by successive rinses with sterile water. The seed coats were removed and zygotic embryo was rescued. Embryos were transferred to Murashige and Skoog (MS) culture medium with macronutrients diluted at 25% and cultured in both, dark and light conditions, at 25±1°C. After 14 days an 88% and 77% of germination in dark and light conditions was obtained, respectively. These results are the first reports of *in vitro* germination of *M. oleifera* in Chile and show the ability to generate a culture protocol to enhance future nutraceutical uses in the Country.

### Biography

Priscila Cartes has completed her Doctorate degree at the age of 29 years from the University of Concepción, Chile. She is Director at Vitroflora Austral Ltda. managing the scientific area of the company. She has participated in more than 10 papers in reputed journals and has attended several conferences in the Forest biotechnology area, especially in plant tissue culture issue.

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## Measurement of nutritionally important starch fractions and kinetic study of starch digestion in nine sorghum cultivars grains from Algeria

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**T**his work aims at evaluating grain quality and starch digestibility variation among sorghum cultivars grown in Algeria. The samples were nine sorghum cultivars cultivated in the Sahara of Algeria. First, some structural characteristics of grains were measured. Total starch (TS) varied between 71.91% and 84.93%, digestible starch (DS) between 68.34% and 79.78%, and resistant starch (RS) ranged from 2.77% to 8.56%. The kinetic of starch hydrolysis in flours was studied in the condition when the reaction displayed First-order kinetic model and adequately predicted the rate and extent of starch digestion. For all flours sorghum cultivars starch were digested with different extents, digestible starch at infinite time ( $D_{\infty}$ ) ranged from 49.50 to 99.41 g/100 g dry starch, while the hydrolysis index (HI) was 39.12 % to 71.49% and high average glycemic index (GI<sub>avg</sub>) ranged from 64.40 to 89.79 for all flours sorghum cultivars. Algerian sorghums are of an acceptable nutritional value with digestibility characteristics major to human health and nutrition.

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