SIMULATED DIGESTION *in vitro* ON BIOACTIVITY OF EXTRACTS FROM LEAVES OF UVALAMA (*Vitex mollis*)

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Introduction. *Vitex mollis* (uvalama) is a native plant from México, found mainly in the states of Sinaloa, Sonora, Morelos and Jalisco (1). In this last state, the plant is found in the Ciénega region, rich in agriculture. The fruit is consumed as food by the inhabitants (2). Teas made from leaves are used to treat various ailments. However, there are no studies about on bioactivity (antioxidant capacity) when the plant is consumed and digested. Therefore, the objective of this work was to simulate digestion *in vitro* on bioactivity of methanolic extracts from leaves of *V. mollis*.

Methods. *Vitex mollis* leaves were collected from three different sea-level rise of the Ciénega region of Jalisco: 1,850 m (H1), 1,750 m (H2): and 1,800 m (H3). Aqueous extractions of dry leaves were obtained with a final concentration of 0.075 g/mL (3). These extracts were used in the simulated *in vitro* digestion measuring the antioxidant capacity by DPPH (2,2 '-diphenyl-1-picryl hidrazilo), ABTS (2,2 '-azinobis-3-ethilbenzotiazolin-6-sulfonic acid) and Folin-Ciocalteu (total phenols) methods (4), in each stage of the process. These stages were: before extract consumed (Initial); adding pepsine (pH 2) and pancreatine (pH 7) digestive enzyme; and dialyzed (D) and no dialyzed (ND) part of the dialysis membrane (Sigma, D9777) simulating the gut absorption (3). Gallic acid was used as standard and all treatments were carried out by triplicate. Multi-factor analysis of variance was employed ($P<0.05$).

Results.
All extracts presented a decrease of the antioxidant capacity in DPPH and total phenols in dialized and no dialyzed part of the dialysis membrane. The major absorption of antioxidants was observed in no dialyzed part. All extracts showed similar behavior. ABTS was more sensible at antioxidant compounds because the absorption was near to 85 %.

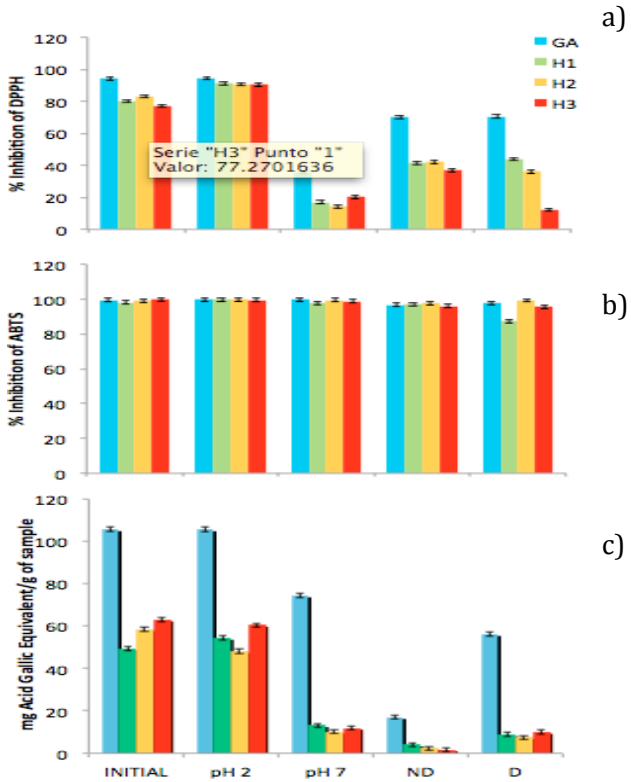

Fig. 1. Antioxidant capacity with DPPH (a), ABTS (b) and total phenols (c) in the simulated digestion *in vitro* at different stages: initial, adding pepsine (pH 2) and pancreatin (pH 7) enzymes, dialyzed (D) and no dialyzed (ND) part of the dialysis membrane. GA: Gallic acid. Samples: H1, H2 and H3.

Conclusions.
Extracts from leaves of *V. mollis* showed in ABTS the best absorption simulated *in vitro*. This means that the extract can be a good source or antioxidants to prevent various ailments.

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