In vitro antidiabetic and anti-obesity activities of two methanolic pulp extracts of *Malus domestica Borkh*

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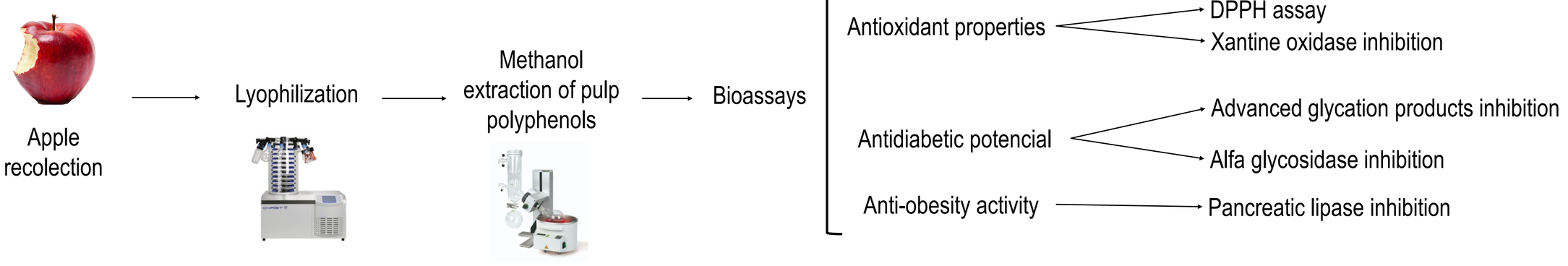
Introduction

Apples are fruits of great agricultural and economic interest in Europe, being also highly appreciated for its nutritional value and its association with several health benefits. The largest amount of apple consumed in Spain corresponds to commercial and imported varieties, being the second fruit tree in production after peaches in Spain, with 0.5 MT produced according to FAO data . Some studies suggest that its consumption produces a decrease in the risk of suffering cardiovascular diseases and diabetes, which could be related to the presence of polyphenols.

Objetives

Evaluation of the antioxidant, antidiabetic, and anti-obesity effects of pulp apple extracts through in vitro assays. The promotion of the consumption of fruits and vegetables and the increasement of the competiveness of the fruit sector.

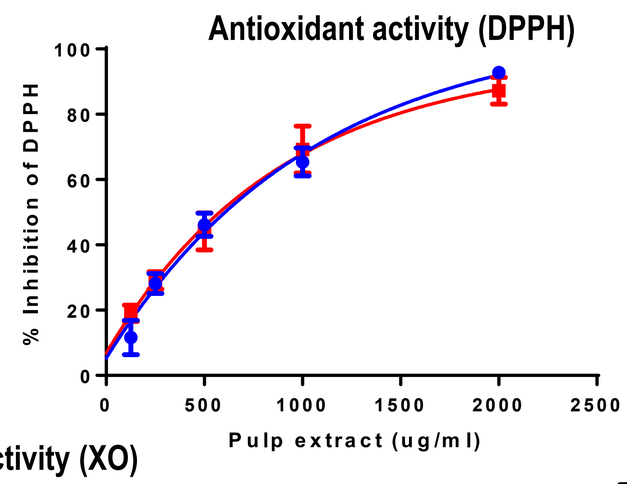
Materials and method

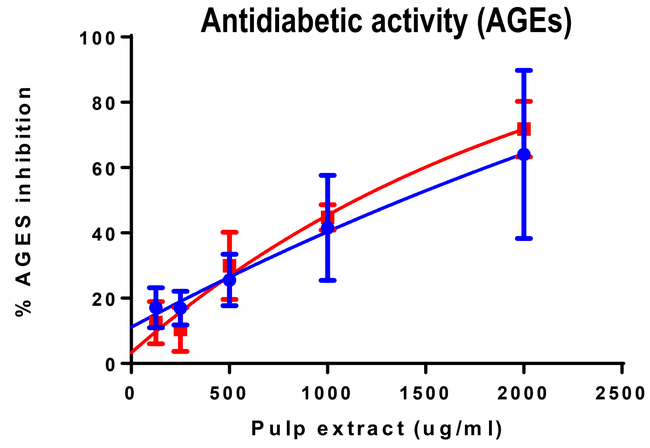


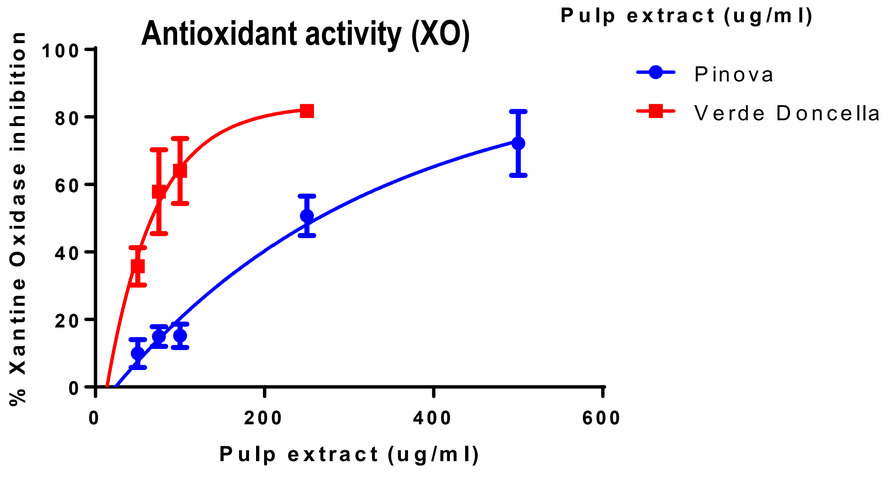
Results

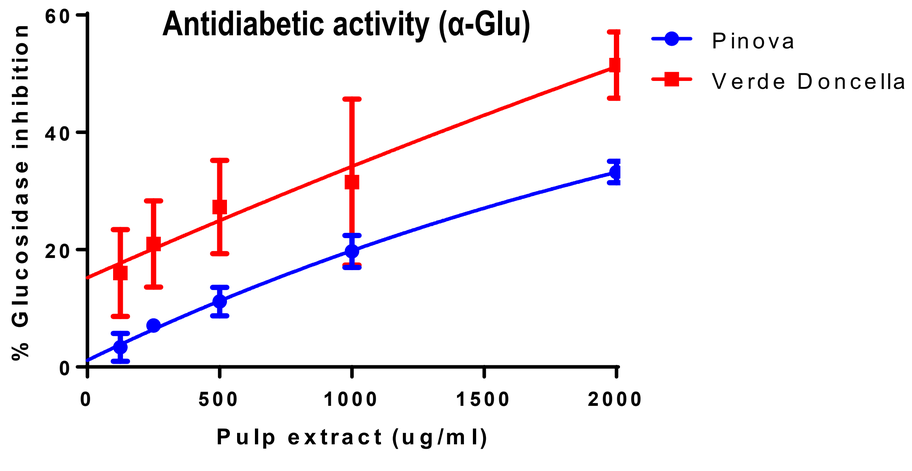
Folin Ciocalteau

Sample	Mg polyphenols/g extract
V.Doncella	9,51
Pinova	10,73









Conclusions

The results of Verde Doncella are slightly better than Pinova variety. Verde Doncella shows better IC50 in AGEs inhibition and glucosidase inhibition assays than the Pinova pulp extract, spite of having almost the same total polyphenol content. This results show a better antidiabetic activity of Verde Doncella extract. The trend continues at xantine oxidase assay, which is a better approach to a physiological situation in the evaluation of antioxidant properties. No inhibition of pancreatic lipase was found.

References

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