

# Cytoprotective and anti-inflammatory properties of the bioaccessible fractions of encapsulated HPP-treated mango peel extracts

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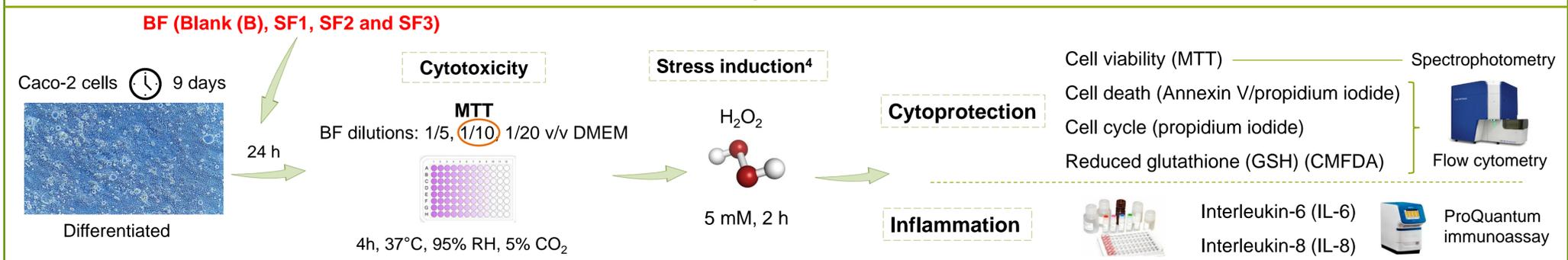
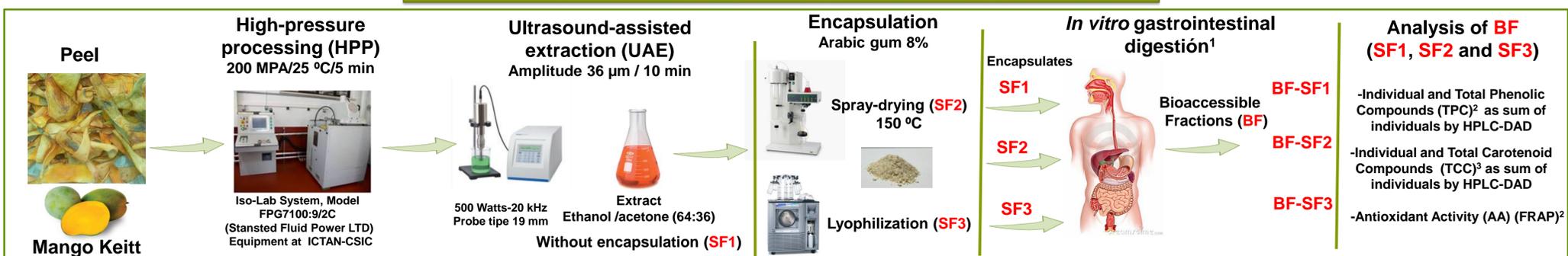
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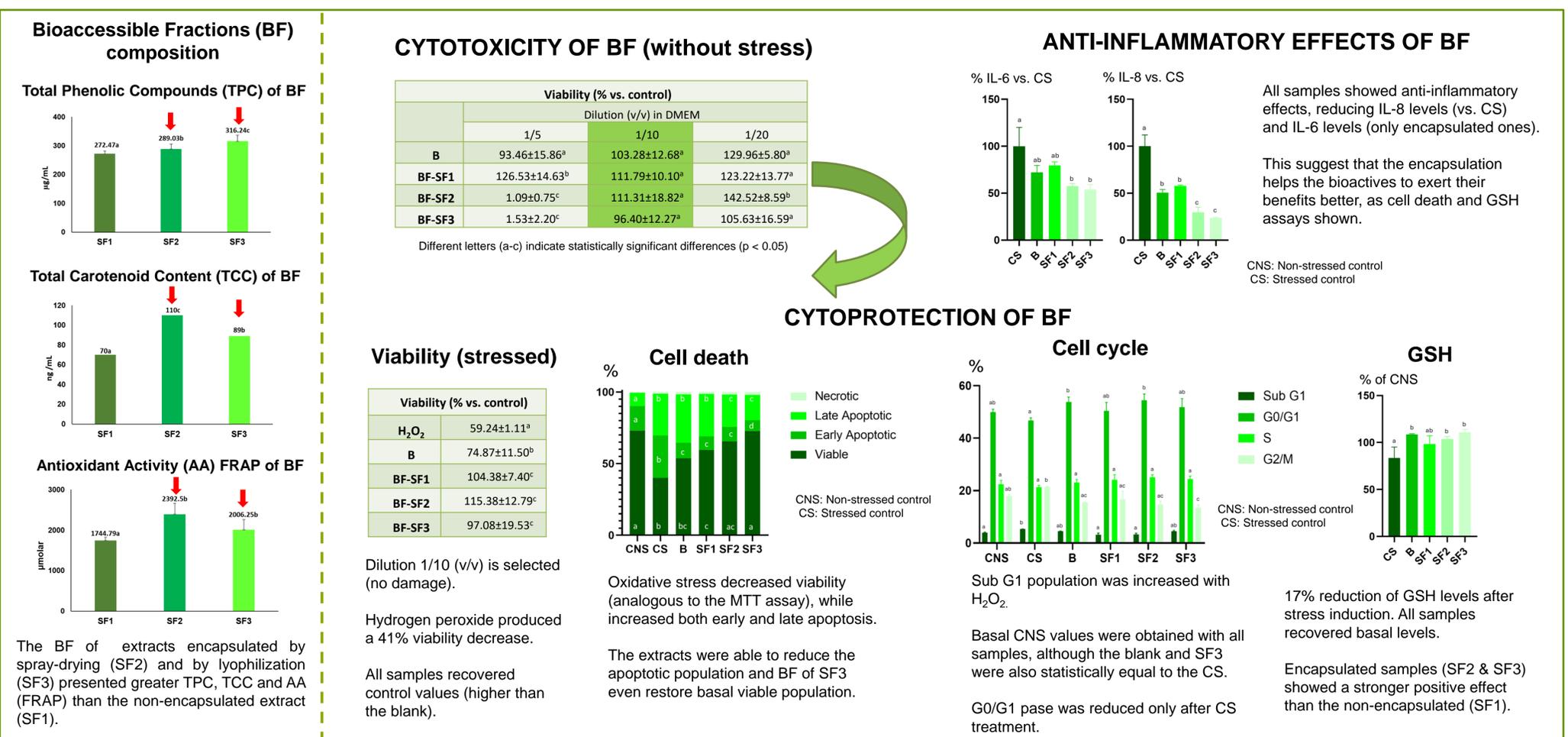
## INTRODUCTION & AIM

Fruit by-products are source of bioactive compounds (carotenoid and phenolic compounds) with antioxidant and anti-inflammatory properties. Ultrasound-assisted extraction (UAE), high-pressure processing (HPP) and encapsulation are sustainable technologies for their extraction and protection. The aim of this study was to evaluate the total carotenoid compounds (TCC), total phenolic compounds (TPC) and antioxidant capacity before and after *in vitro* digestion, and the cytoprotective and anti-inflammatory effects of the bioaccessible fractions (BF) of mango peel extracts. Additionally, to assess the effect of the encapsulation of the extracts on the outcome of these assays.

## METHODS



## RESULTS & DISCUSSION



## CONCLUSION

Greater TCC, TPC, AA and cytoprotective and anti-inflammatory effects were observed in encapsulated samples (SF2 and SF3) compared to the non-encapsulated one (SF1), although no differences were observed between spray-drying and lyophilization. Thus, both encapsulation techniques are equally effective and may enhance the bioactivity of mango peels.

## REFERENCES

<sup>1</sup>Brodkorb et al. Nat Protoc, 2019, 14, 991–1014 (INFOGEST); <sup>2</sup>Fernández-Jalao et al. J Food Eng, 2019, 213, 60-68; <sup>3</sup>Estévez-Santiago et al. Food Funct, 2016, 7, 1354; <sup>4</sup>Gómez et al. Food Res Int., 2019, 120, 52-61.

## ACKNOWLEDGEMENTS



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